UNILUX
HVAC INDUSTRIES

Vertical Stack Hybrid Heat Pumps

Model UVHHL: Sizes 02–12 / 0.5–3.0 Tons

Leading Manufacturers of High-Rise Residential HVAC Equipment

APARTMENTS | CONDOS | ASSISTED LIVING | HOTELS | RESORTS

On-Demand, Energy Efficient Comfort

The Unilux HVAC Hybrid Heat Pump combines the cooling power of a heat pump with the heating efficiency of a fan coil for reliable, on-demand heating and cooling all year round.

Heating

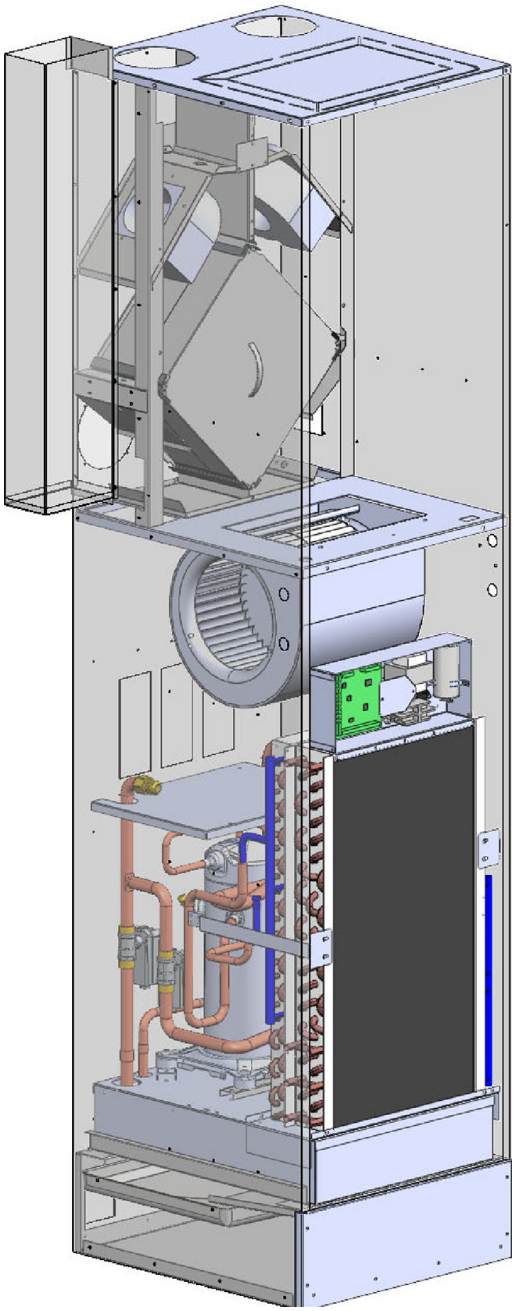
Heating is provided by a highly efficient hot water coil. Air flows through the coil and is circulated through the suite by a fan. The hydronic coil is connected to a building-wide hot water riser and boiler system.

Cooling

Cooling is provided by an efficient water cooled air-conditioner.

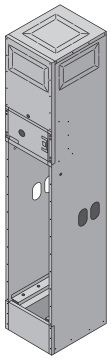
ERV Upgrade

Unilux HVAC has developed a patented energy recovery ventilation system (ERV) that can be integrated with our full line of vertical stack heat pumps. Our integrated ERV solutions include multiple dampers and temperature sensors to ensure cores do not freeze when outside temperatures drop below freezing, without the need for an electric heater.



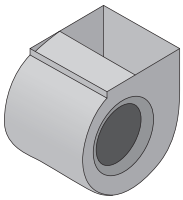
Standard Features

Unilux vertical stack hybrid heat pump units are ETL listed for safety requirements and meet UL 1995 / CSA22.2 #236 – Issue 2011 / UL 60335-2-40 4th Edition standar ds for safety heating and cooling equipment.



1. Cabinet

Manufactured with satin-finished steel, the cabinet offers supply openings on the front, back, left, right or top. It is fully lined with fiberglass insulation reinforced by a thermosetting resin. It is coated on the air stream side with an acrylic facing without the use of flammable adhesives. Insulation inside the unit has a flame-spread rating no more than 25 and a smoke-developed rating no more than 50.

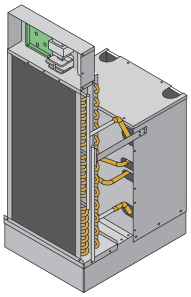


2. Fan & Motor Assembly

A thermally-protected, multi-speed ECM motor is resiliently mounted to a centrifugal fan which has a galvanized steel forward-curved DWDI wheel in a galvanized housing.

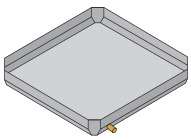
3. Refrigeration Chassis

A removable chassis with compressor isolation reduces vibration and provides easy and convenient service access. The chassis is complete with a rotary or scroll compressor, coax heat exchanger, TX valve, balancing valve, 2-way valve and motorized actuator - all housed within a sound-dampening cabinet. Complete with a DX coil and R-454B refrigeration circuit.



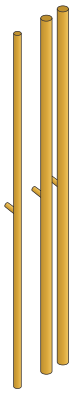
4. Hydronic Hot Water Coil Assembly

Coils are corrugated aluminum fins mechanically bonded to ½" OD copper tube. The number of rows and circuiting are selected to suit scheduled capacities. Coils are rated for a maximum working pressure of 300 psig.



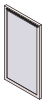
5. Stainless Steel Drain Pan and Overflow Sensor

Stainless-steel drain pan with neoprene insulation. A pre-formed rubber drain hose will connect the drain pan with the condensate riser to form P-trap and will be easily accessible for cleaning. The pan includes an overflow sensor to detect rising water levels and turn off the unit to prevent flooding.



6. Risers

Supply and return risers are type 'L' copper and condensate risers are type 'DWV'. All have 75mm (3") deep expanded ends to facilitate field installation. Condensate risers are insulated with 1" fibreglass covered with a vapour barrier jacket, which complies with ASTM 84 for flame-spread and smoke-developed ratings. The insulation is continuous over the riser length within the height of the cabinet.

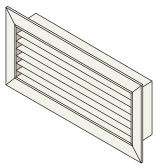


7. Filter

One 1" MERV 8 filter and one disposable filter are included with the return air intake opening.

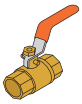
8. Access Panel

Steel construction with a durable baked-enamel powder coat finish, featuring a hinged door for easy filter exchange.



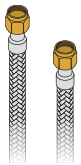
9. Supply Air Grilles & Registers

Double-deflection supply air grilles have adjustable vertical and horizontal louvers. They are constructed with light-gauge, powder-coated metal.



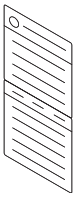
10. Ball Valves

Manual shut-off valves.



11. Water Hoses

Flexible supply and return hoses for easy removal during maintenance and replacement.



12. Unit Tagging

Units can be tagged with specific room numbers, riser numbers and other unique requirements.

Performance Schedule

General Data						
Model	Tonnes	CFM	ESP	GPM	Fluid	WPD
UVHH-02-L	0.5	250	0.10	1.75	Water	2.34
UVHH-03-L	0.75	340	0.10	2.5	Water	4.2
UVHH-04-L	1.00	450	0.10	3.25	Water	4.96
UVHH-05-L	1.25	540	0.10	4.00	Water	7.81
UVHH-06-L	1.50	650	0.10	5.00	Water	11.65
UVHH-08-L	2.00	810	0.15	6.00	Water	4.34
UVHH-10-L	2.50	1,060	0.15	7.50	Water	6.8
UVHH-12-L	3.00	1,200	0.15	8.50	Water	8.3

Electrical Data (with ECM)						
Model	Voltage/Phase/ Hz	Compr. RLA	Compr. LRA	Blower FLA	MCA	Circuit Breaker
UVHH-02-L	208/1/60	3.1	15.4	6.1	6.9	15
UVHH-03-L	208/1/60	4.0	22.0	7	8	15
UVHH-04-L	208/1/60	4.6	25.0	7.6	8.8	15
UVHH-05-L	208/1/60	5.2	26.0	8.2	9.5	15
UVHH-06-L	208/1/60	6.6	36.0	9.6	11.3	15
UVHH-08-L	208/1/60	8.9	43.0	11.9	14.1	20
UVHH-10-L	208/1/60	12.5	67.0	17.5	20.6	30
UVHH-12-L	208/1/60	14.4	86.0	19.4	23	35

Cooling Data									
Model	EAT-db	EAT-wb	Capacity Total	Capacity Sensible	WATT	EER	THR	EWT	LWT
UVHH-02-L	80.6°F	66.2°F	6,999	5,502	526	13.3	8,740	86°F	96°F
UVHH-03-L	80.6°F	66.2°F	9,526	7,373	575	16.6	11,429	86°F	95.1°F
UVHH-04-L	80.6°F	66.2°F	11,986	9,731	784	15.3	14,580	86°F	95°F
UVHH-05-L	80.6°F	66.2°F	13,481	10,903	946	14.2	16,612	86°F	94.3°F
UVHH-06-L	80.6°F	66.2°F	17,459	14,015	1,324	13.2	21,841	86°F	94.7°F
UVHH-08-L	80.6°F	66.2°F	24,518	18,772	1,808	13.6	30,502	86°F	96.2°F
UVHH-10-L	80.6°F	66.2°F	29,642	23,223	2,037	14.6	36,384	86°F	95.7°F
UVHH-12-L	80.6°F	66.2°F	34,488	26,055	2,546	13.5	42,916	86°F	96.1°F

Heating Data				
Model	EAT-db	Capacity Total	EWT	LWT
UVHH-02-L	68°F	12,243	120°F	106°F
UVHH-03-L	68°F	14,899	120°F	108.1°F
UVHH-04-L	68°F	18,547	120°F	108.6°F
UVHH-05-L	68°F	21,877	120°F	109.1°F
UVHH-06-L	68°F	24,687	120°F	110.1°F
UVHH-08-L	68°F	32,811	120°F	109.1°F
UVHH-10-L	68°F	40,282	120°F	109.3°F
UVHH-12-L	68°F	47,887	120°F	108.7°F

Our state-of-the-art designs are demanded by today's best developers, engineers and owners. Contact us to learn why Unilux HVAC is the preferred choice of professionals throughout North America for vertical stack HVAC solutions.

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