

Vertical Stack Geothermal Heat Pumps

Model UVHP-XX-G: Sizes 03-10 / 0.75 -2.50 Tons



Leading Manufacturer of High-Rise
Residential HVAC Equipment



APARTMENTS | CONDOS | ASSISTED LIVING | HOTELS | RESORTS

Benefits Overview

Standard Features

Unilux vertical stack heat pumps are designed to meet the requirements of UL 1995 / CSA22.2 #236—Issue 2011 Standard for safety heating and cooling equipment.

1. Cabinet

Manufactured with 20-gauge satin steel. Configured with front, back, left, right or top supply air openings. Cabinet is fully insulated with 1" fiberglass with 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. Stainless Steel Drain Pan and Overflow Sensor

Stainless-steel drain pan with neoprene insulation. A flex 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.

3. 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. Supply and return risers are insulated with 1" fiberglass 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.

4. Supply Air Grilles & Registers

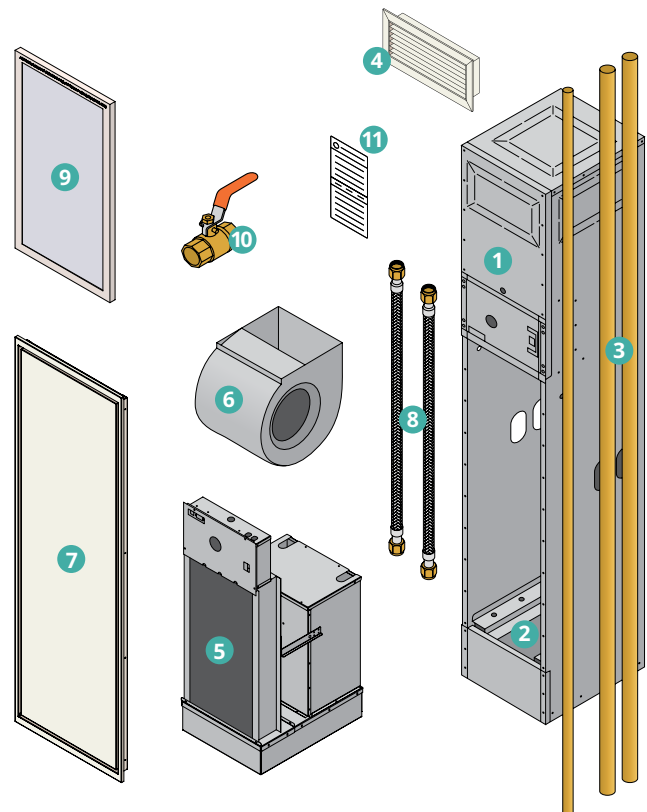
Double-deflection supply air grilles have adjustable vertical and horizontal louvers. They are constructed with light-gauge, powder-coated metal.

5. Refrigeration Chassis

A completely removable, floating-design chassis minimizes vibration and allows easy access for service. The chassis is complete with a rotary or scroll compressor enclosed in a sound dampening and isolated box, insulated coax heat exchanger, TX valve, 4-way reversing valve, balancing valve, 2-way valve and motorized actuator, DX coil and R410a refrigerant piping.

6. 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.



7. Access Panel

20-gauge steel construction finished in a durable baked enamel powder coat. Includes a hinged door for easy filter exchange.

8. Water Hoses

Flexible supply and return lines isolate compressor noise from the building's pipe system.

9. Filter

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

10. Ball Valves

Manual shut-off valves.

11. Unit Tagging

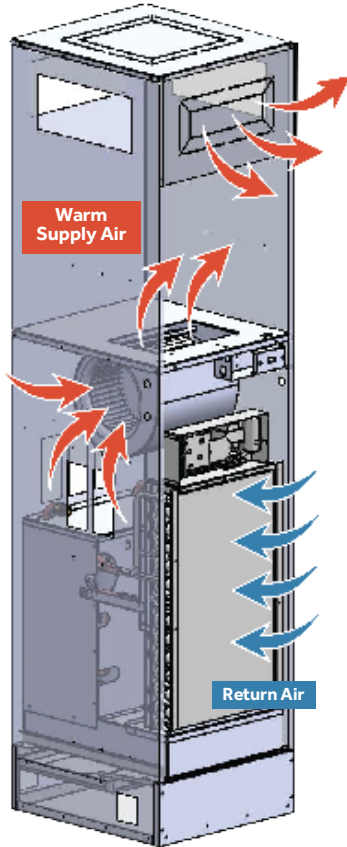
Units can be tagged with specific room numbers, riser numbers and other unique requirements.

Benefits Overview

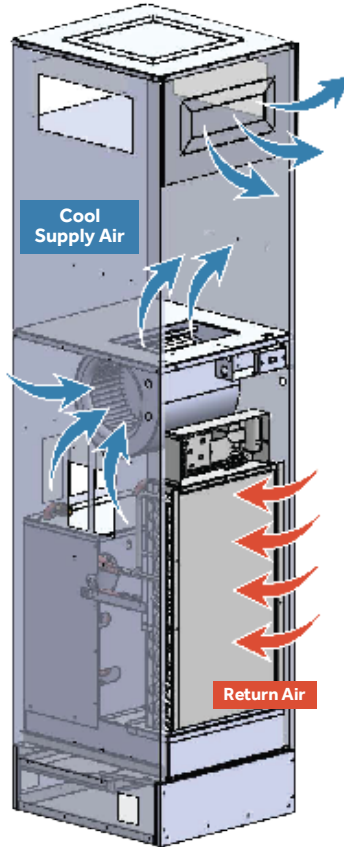
Efficient Heating and Cooling

Geothermal heat pumps are the most energy efficient option on the market. Unilux HVAC manufactures vertical ground source heat pumps which use a closed loop of fluid running underground. By utilizing the earth's natural thermal properties, geothermal heat pumps use drastically less energy than traditional HVAC systems, providing long-term savings with green technology. Geothermal heat pumps can help earn LEED points for the Energy and Atmosphere category.

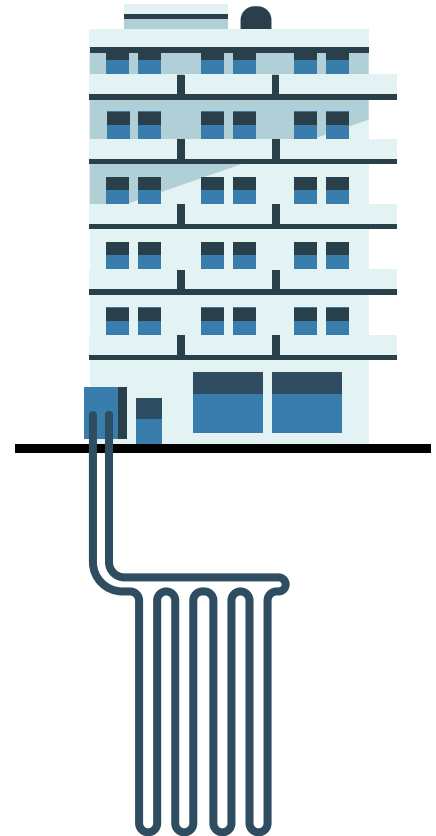
Heating Mode



Cooling Mode

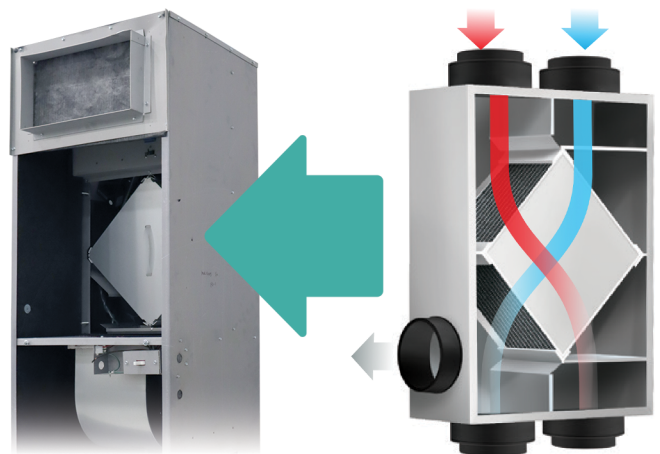


Vertical Closed Loop System



ERV Upgrade

Unilux HVAC has developed a patented energy recovery ventilation system (ERV) that can be integrated with our full line of vertical stack fan coils. Our ERV cores further enhance comfort by transferring moisture between exhaust and fresh air, providing cost-effective moisture control. 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.



Performance Schedule

| General Data | | | | | | |
|--------------|--------|-------|------|------|-------|-------|
| Model | Tonnes | CFM | ESP | GPM | Fluid | WPD |
| UVHP-03-G | 0.75 | 460 | 0.10 | 2.50 | Water | 10.85 |
| UVHP-04-G | 1.00 | 500 | 0.10 | 3.00 | Water | 11.19 |
| UVHP-05-G | 1.25 | 560 | 0.10 | 4.00 | Water | 12.11 |
| UVHP-06-G | 1.50 | 650 | 0.10 | 5.00 | Water | 16.55 |
| UVHP-08-G | 2.00 | 840 | 0.15 | 6.00 | Water | 11.54 |
| UVHP-10-G | 2.50 | 1,060 | 0.15 | 7.50 | Water | 12.31 |

| Electrical Data | | | |
|-----------------|------------------|--------|-----------------|
| Model | Voltage/Phase/Hz | MCA | Circuit Breaker |
| UVHP-03-G | 208-230/1/60 | 6.9 A | 15 A |
| UVHP-04-G | 208-230/1/60 | 8.2 A | 15 A |
| UVHP-05-G | 208-230/1/60 | 9.2 A | 15 A |
| UVHP-06-G | 208-230/1/60 | 11.6 A | 15 A |
| UVHP-08-G | 208-230/1/60 | 16.4 A | 25 A |
| UVHP-10-G | 208-230/1/60 | 18.4 A | 30 A |

| Cooling Data (GLHP) | | | | | | | | | |
|---------------------|---------------|-------------------|----------------|-------------------|-------|-------|--------|-----|-------|
| Model | EAT-db | EAT-wb | Capacity Total | Capacity Sensible | WATT | EER | THR | EWT | LWT |
| UVHP-03-G | 80.6°F / 27°C | 66.25°F / 19.03°C | 9,900 | 8,312 | 575 | 17.22 | 11,862 | 77 | 86.49 |
| UVHP-04-G | 80.6°F / 27°C | 66.25°F / 19.03°C | 13,040 | 10,026 | 753 | 17.32 | 15,609 | 77 | 87.41 |
| UVHP-05-G | 80.6°F / 27°C | 66.25°F / 19.03°C | 15,724 | 11,980 | 914 | 17.20 | 18,844 | 77 | 86.42 |
| UVHP-06-G | 80.6°F / 27°C | 66.25°F / 19.03°C | 19,621 | 14,799 | 1,134 | 17.30 | 23,491 | 77 | 86.40 |
| UVHP-08-G | 80.6°F / 27°C | 66.25°F / 19.03°C | 26,613 | 20,016 | 1,531 | 17.38 | 31,838 | 77 | 87.61 |
| UVHP-10-G | 80.6°F / 27°C | 66.25°F / 19.03°C | 25,638 | 31,947 | 1,850 | 17.27 | 38,258 | 77 | 87.20 |

| Heating Data (GLHP) | | | | | | | |
|---------------------|-------------|----------------|-------|------|--------|-----|------|
| Model | EAT-db | Capacity Total | WATT | COP | THA | EWT | LWT |
| UVHP-03-G | 68°F / 20°C | 7,452 | 598 | 3.65 | 5,412 | 32 | 27.7 |
| UVHP-04-G | 68°F / 20°C | 10,273 | 831 | 3.62 | 7,438 | 32 | 27.0 |
| UVHP-05-G | 68°F / 20°C | 11,705 | 952 | 3.61 | 8,459 | 32 | 27.8 |
| UVHP-06-G | 68°F / 20°C | 15,106 | 1,223 | 3.62 | 10,934 | 32 | 27.6 |
| UVHP-08-G | 68°F / 20°C | 18,707 | 1,519 | 3.61 | 13,525 | 32 | 27.5 |
| UVHP-10-G | 68°F / 20°C | 21,202 | 1,716 | 3.62 | 15,348 | 32 | 27.9 |

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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