

How to specify Panthaire APEX

Specification sequence

Overview

For cellars designed to look finished. Panthaire APEX is a factory-charged, fully ducted wine cellar cooling unit installed in an adjoining conditioned space. Only supply and return grilles appear in the room, and the grilles can match the millwork. The drawing set carries the envelope, the load, the placement, the runs, and the electrical.

1. Confirm the envelope

R-20 walls and ceiling, vapor barrier on the warm side, sealed penetrations. A glass door adds about 15% to the cooling load. A glass wall adds more.

2. Size the load

Enter length, width, height, glass area, and insulation in the BTU calculator. APEX 3500, 5000, and 7000 cover up to 900, 1,200, and 2,000 ft³ (25, 34, and 57 m³) when the envelope meets specification.

3. Place the unit

A conditioned mechanical space held at 50–77°F (10–25°C) year-round. Garages, attics, and crawlspaces do not meet this condition. Keep published clearances on all sides.

4. Route ducts and drain

Insulated supply and return, 25 ft maximum per run. Short, straight runs outperform long flex. Slope the condensate line to an approved receptor with no trapped low points.

5. Electrical

Dedicated 115V/60Hz circuit: 15A for APEX 3500 and 5000, 20A for APEX 7000. Do not share the circuit with lighting or a wine refrigerator.

6. Installation

A licensed HVAC contractor. DIY installation voids the warranty. Panthaire can introduce an approved contractor on an active project.

Before the order

Send Panthaire the five measurements (room volume, glass area and type, insulation R-value, mechanical space and its temperature range, duct and drain runs), three photographs (the cellar or the plan, the mechanical space, the drain path), and the door or glass specification. A specification review is returned within two business days. 2 years warranty.

Model	APEX3500	APEX5000	APEX7000
Cooling Capacity (BTU/h)	3353	4462	6346
Cellar Size (cu. ft.) with R20 insulation	Up to 900	Up to 1200	Up to 2000
Refrigerant	R290	R290	R290
Power Supply	115V/60Hz, 15A	115V/60Hz, 15A	115V/60Hz, 20A
Current Draw	7.5A	9.2A	12.8A
Dimensions (L x W x D)	28.4" x 12.2" x 12.2"	33.9" x 13.8" x 13.8"	40.2" x 15.8" x 15.8"
Weight	36 kg (79.4 lbs)	40 kg (88.2 lbs)	43.5 kg (95.9 lbs)
Duct Size (Supply)	8"	8"	8"
Duct Size (Return)	8"	8"	10"
Max Duct Length	25' per duct	25' per duct	25' per duct
Air Flow Speed I (CFM)	260	360	470
Temperature Range*	50–70°F	50–70°F	50–70°F
Drain Connection	5/8" ID	5/8" ID	5/8" ID
Warranty	2 years		

*Conditions: 50–70°F (10–21°C) cellar, 50–77°F (10–25°C) ambient at the unit.