

Split System Outdoor Condensing Units

Pair with
Make-Up Air Units
for Industrial Cooling



RC-Series

Rapid
Engineering LLC

Split System Outdoor Condensing Units

RAPID® split system outdoor condensing units are typically installed in new or retrofit commercial and industrial applications, such as hotels, sports arenas, office buildings and manufacturing facilities.

Long-Lasting Construction Provided by:

- Heavy-duty cabinet constructed of galvanized steel panels and mounted on two steel rails to facilitate rigging and installation.
- Two-coat, primer-paint finish on both interior and exterior of cabinet panels that meets the 1,000 Salt Spray Test as described in ASTM B117, "Standard Practice for Operating Salt Spray (Fog) Apparatus".
- Stainless steel and/or MAGNI 555®-coated hardware to help prevent fastener corrosion.
- Vinyl-coated condenser fan guards to help ensure long-term durability.
- Condenser coils composed of aluminum fins and mechanically-expanded, seamless copper refrigeration tubing to help ensure long-term efficient heat transfer from tube to fin.
- Optional harsh environment protection coating on coils and cabinet that exceeds the 10,000 Salt Spray Test as described in ASTM B117, "Standard Practice for Operating Salt Spray (Fog) Apparatus".

Ease of Maintenance Provided by:

- Direct-drive condenser fans with permanently-lubricated or sealed ball bearings that require little maintenance and no oiling.
- Liquid line shut-off valve to isolate liquid line for upkeep and/or repairs.
- Liquid and suction line service ports that provide hose connections when charging refrigerant into system.
- Suction line accumulators that help eliminate return of liquid refrigerant back to compressor.
- Optional 115 V GFCI electric receptacle to provide easy-access power to service technician at unit.

Reliable, Efficient System Operation Provided by:

- Condenser fans that are both statically and dynamically balanced in order to provide smooth performance.
- High-efficiency scroll compressors with crankcase heaters to help prevent refrigerant migration.
- Assembly, testing and installation preparation by factory staff, including charging of compressors with oil and charging of circuits with nitrogen holding charge.
- Phase/voltage monitor to help detect abnormalities in electric supply.
- Optional digital scroll compressor assembly that helps provide continuous capacity modulation for part load conditions.
- Optional fan cycling or variable speed head pressure control to help ensure proper unit operation at low ambient temperatures.
- Optional liquid line check and relief valves to reduce excessive pressure or reversed refrigerant flow.

Suit Most Applications with Availability of:

- Optional circuiting with connection for hot gas reheat to re-warm dehumidified air to a neutral discharge temperature.
- Optional direct digital or electromechanical controls to meet a wide range of operational needs.
- Optional receiver(s) for long line applications to help facilitate pump-down during service.

Direct Digital Controller for 3200-Series

The RAPID® ALC Control is a direct digital controller that can efficiently monitor and control RAPID™ condensing units. Features and benefits of the ALC Control include:

- Greater control of equipment with ability to monitor room temperature and humidity, outside air temperature and humidity and leaving air temperature, as well as to change a number of setpoints (as applicable depending on equipment type and application).
- Detect problems earlier with ability to monitor status of compressor(s), supply fan and exhaust fan (as applicable depending on equipment type and application).
- Design flexibility as the controller can operate in a stand-alone capacity or in conjunction with a Building Management System (BMS) via the BACnet®, Modbus, Lonworks® and N2 protocols.
- Simple field set-up without the need for additional downloads or technical assistance as the protocol point mapping is pre-set in the factory.

- Customizable with digital outputs, analog outputs and universal inputs. Customized programming to meet a specific application's sequence of operation is also available.

3200A Unit (Air-Cooled for 100% Outside Air Cooling Applications)

Design: Heat is transferred from refrigerant to air at condenser coil by condenser fan(s).

Function: In conjunction with complementary air handler or air turnover unit, provides cooled and dehumidified 100% outside air to the conditioned space.

Application: Ideal for applications requiring cooled and dehumidified 100% outdoor air for make-up air cooling.

3200A MODEL	CONDENSER FAN AIRFLOW		COOLING CAPACITY		EER
	CFM	m ³ /h	Btu/h	kW	
051	4,000	6,800	46,500	13.6	13.1
061	4,000	6,800	55,600	16.3	13.1
071	4,000	6,800	74,500	21.8	11.6
101	6,200	10,500	107,500	31.5	11.4
141	6,200	10,500	137,100	40.2	10.9
171	12,400	21,100	165,900	48.6	12.2
201	12,400	21,100	192,000	56.3	11.8
271	12,400	21,100	241,300	70.7	10.8
361	28,000	47,600	288,600	84.6	11.6
421	28,000	47,600	369,700	108.3	11.0

3200C Unit (Air-Cooled for Recirculating Air Cooling Applications)

Design: Heat is transferred from refrigerant to air at condenser coil by condenser fan(s).

Function: In conjunction with complementary air handler or air turnover unit, provides cooled recirculating air to the conditioned space.

Application: Ideal for applications requiring cooled recirculating air.

3200C MODEL	CONDENSER FAN AIRFLOW		COOLING CAPACITY		EER
	CFM	m ³ /h	Btu/h	kW	
044	4,000	6,800	35,100	10.3	13.9
054	4,000	6,800	47,100	13.8	13.6
064	4,000	6,800	59,500	17.4	13.4
074	6,200	10,500	78,600	23.0	13.2
104	6,200	10,500	91,600	26.8	12.6
134	6,200	10,500	113,900	33.4	11.9
154	12,400	21,100	158,300	46.4	12.6
194	12,400	21,100	178,800	52.4	12.3
254	12,400	21,100	248,700	72.9	11.4
314	12,400	21,100	290,600	85.2	11.8
374	28,000	47,600	370,900	108.7	10.8
414	28,000	47,600	415,000	121.6	10.5

Notes: 1. EER= Energy Efficiency Ratio (SEER=Seasonal Energy Efficiency Ratio for units with cooling capacity below 65,000 Btu/h).

2. Net cooling performance is based on 45.0 °F (7.5 °C) suction dewpoint temperature, 60.0 °F (15.6 °C) return gas temperature and 95.0 °F (35.0 °C) db/75.0 °F (23.9 °C) wb ambient temperature.



Complete your cooling installation with one of our Direct-Fired or Indirect-Fired make-up air units

[available for 100% outside air or recirculated air applications]

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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Installation Code and Annual Inspections:

All installation and service of RAPID® equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Rapid Engineering LLC and conform to all requirements set forth in the Rapid Engineering LLC manuals and all applicable governmental authorities pertaining to the installation, service, operation and labeling of the equipment. To help facilitate optimum performance and safety, Rapid Engineering LLC recommends that a qualified contractor conduct, at a minimum, annual inspections of your RAPID® equipment and perform service where necessary, using only replacement parts sold and supplied by Rapid Engineering LLC.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through RAPID® representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

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Printed in U.S.A.

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