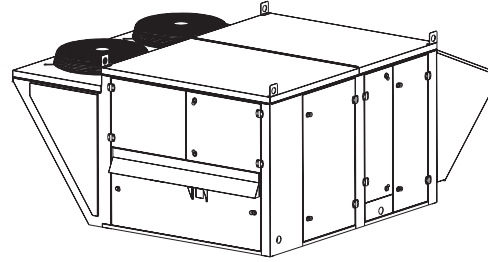


Model RDCA
HEATING AND COOLING MAKEUP AIR PACKAGED SYSTEMS



Description

Reznor® Model RDCA packaged cooling and cooling/reheat pump™ makeup air systems are available in the second generation of the Modular Air Processing System (MAPS® II).

MAPS II packaged direct expansion rooftops are designed to cool and heat high outside air year round for makeup air and ventilation applications. These rooftop systems include the same approaches to outside air treatment found in field engineered or split systems.

Model RDCA includes a gas heat section, the indirect fired gas furnace can provide a staged or modulated temperature rise up to 100°F.

Unit Features

Capacity Steps

- Standard 3-stage cooling and gas heating in 1/3 incremental steps to minimize temperature swing and improve operating reliability

Cabinet

- Standard double-wall insulated cabinet resists climate impact to performance
- Outer casing of G90 galvanized steel substrate 60 gloss painted finish coat
- Hinged service panels (double wall construction and gasketed with door pulls included for easy access/service - door handles included)
- Mechanical door stay to hold door open during service
- Optional weatherproof convenience outlet accessible from outside the unit
- Dedicated downflow configuration for rooftop application
- Dedicated 100% outside air intake and filter transition (provides uniform filter and cooling coil loading) OR dedicated mixed air intake cabinet (both outside air intake and upflow return air opening)
- Outside air intake hood with 1" permanent pre-filters keeps water and debris outside
- "Z" channel base rail design (reduces unit weight and provides structural integrity)

Filters

- 2" or 4" pleated (25-40% average efficiency) or 2" permanent (Filter rack is field convertible for both filters)

Cooling Section

- Removable stainless steel condensate drain with slope for positive drainage
- Coil designs for various climate applications

Reheat Option

- Reheat coil for nominal dehumidification

Gas Heat Section

- Gas heating with minimum 80% thermal efficiency
- Standard stainless steel heat exchanger
- Temperature Rise 45-100°F
- Furnace sizes of 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650 and 700 MBH input
- Natural gas or propane with intermittent direct spark ignition
- Modulation option, 6:1 turndown (natural gas only)
- Design certified to meet ANSI Z83.8 / CSA 2.6

Blowers

- Slide-out, forward curved fan system - belt drive; adjustable sheave
- Class I blowers

Condensers

- Single-phase fan motors (three-phase motors on Cabinet C sizes) – open drip with slinger
- Internal overload protection

Refrigerant

- Factory charged - R22 (Optional R407c)

Compressors

- Scroll compressor design with internal motor overload
- Optional phase loss protection monitor
- Optional phase loss low voltage monitor

Unit Features (cont'd)

Refrigerant Controls

- External low and high pressure cutouts; Liquid line filter dryers; TXV's; Cooling coil frost protection; Hot gas bypass options on two lead circuits

Blower Motors

- Open dripproof, totally enclosed or premium efficiency

Full-Perimeter Roof Curbs

- Insulated, 16-gauge, downflow or horizontal air flow, full perimeter roof curb
- Integral supply and return air ducts with duct connections

Inlet Air Damper Options

- 100% outside air opening located and sized to provide optimum air distribution across filters and coils, optional damper with 2-position motor (open/closed)
- Motorized outside air and return air dampers with multi-position options and remote selectors
- Motorized outside and return air dampers to maintain building pressure in return air applications

Disconnect Switch

- Through-the-panel, lockable, non-fusible, indoor/outdoor disconnect switch option

Convenience Outlet

- 115 volt (20 amp, field-wired) option

Power Exhaust

- Optional power exhaust for building air factory wired and mounted

Controls

- Solid state DDC control package for enhanced system operation and performance (See Controls Section for a complete description of options and capabilities)
- Hinged electrical panel opens 180 degrees, with permanently mounted wiring diagrams and control instructions
- Electrical Components identified with 1/2" diameter self adhesive labels to match unit specific wiring diagram

Warranty

- One-year parts warranty
- Optional four-year extended warranty on the compressors
- Optional four- or nine-year extended warranty on the gas-fired heat exchanger

Technical Data

Cabinet Size		A					A	A or B*				A	
Climate		For Dry Climates					For Temperate or Semi-Humid Climates						
Model RDCA		025	037	059	077	109	060	078	090	108	120	164	
Cooling Capacity	Tons	2	3	5	6.5	9	5	6.5	7.5	9	10.5	13.5	
Gas Heating Capacity Range	MBH	100 - 200				150 - 200	100 - 200	100 - 300				150 - 200	
Max Motor HP	100 MBH - 9x7 Blower	5	5	5	5	5	5	5	5	5	5	5	
	150 MBH - 9x9 Blower	5	5	5	5	5	5	5	5	5	5	5	
	200 MBH - (2) 9x7 Blowers	5	5	5	5	5	5	5	5	5	5	5	
	250-300 MBH - (2) 9x9 Blowers	--					5	5	5	5	--		
Cooling Capacity Stages		100	100	40/60/100	30/70/100	33/66/100	40/60/100	30/70/100	40/60/100	33/66/100	42/58/100	33/66/100	
Cooling Compressors	Nominal Tons	2	3	2.0/3.0	2.0/4.5	3.0/6.0	2.0/3.0	2.0/4.5	3.0/4.5	3.0/6.0	4.5/6.0	4.5/3.0/6.0	
	Qty	1	1	2	2	2	2	2	2	2	2	3	
Cooling Condensers	Face Area	5.75	5.75	9.6	11.5	17.25	5.75	9.60	9.60	11.50	13.40	17.25	
	Rows	3	3	3	3	3	3	3	3	3	3	3	
	Fans	Qty	1	1	1	1	2	1	1	1	1	2	2
		CFM	3,490	3,490	4,496	5,000	8,487	3,490	3,992	4,496	5,000	7,479	8,487
Evaporator Coils	Face Area	5.2	5.2	5.2 / 5.2	5.2 / 5.2	5.2 / 5.2	5.2	7.3	7.3	7.3	7.3	7.3 / 7.3	
	Rows	2	2	2/2	2/2	2/2	3	3	3	4	4	1/4	
	FPI	7	10	6/6	7/9	9/10	14	13	14	13	13	11/13	
Filter (Qty) and Size (Factory-installed filters are optional.)		(4) 20x20					(4) 20x20						
Net Weight	100 MBH	lbs	799	810	925	967	1,120	885	1,014	1,025	1,004	1,129	1,249
		(kg)	(362)	(367)	(420)	(439)	(508)	(401)	(460)	(465)	(455)	(512)	(567)
	150 MBH	lbs	914	925	1,040	1,082	1,235	1,000	1,129	1,140	1,119	1,244	1,364
		(kg)	(415)	(420)	(472)	(491)	(560)	(454)	(512)	(517)	(508)	(564)	(619)
	200 MBH	lbs	939	950	1,065	1,107	1,260	1,025	1,154	1,165	1,144	1,269	1,389
(kg)		(426)	(431)	(483)	(502)	(572)	(465)	(523)	(528)	(519)	(576)	(630)	
250 MBH	lbs	--					904	915	894	1,019	--		
	(kg)	--					(410)	(415)	(406)	(462)	--		
300 MBH	lbs	--					904	915	894	1,019	--		
	(kg)	--					(410)	(415)	(406)	(462)	--		

Cabinet Size		B				C				
Climate		Dry	Temperate or Semi-Humid		For Temperate or Semi-Humid Climates					
Model RDCA		139	166	184	198	176	226	292	374	
Cooling Capacity	Tons	12	13.5	15	16.5	14.5	18.6	24.4	30	
Gas Heating Capacity Range	MBH	250 - 300				350 - 700				
Max Motor HP	250-300 MBH - (2) 9x9 Blowers	5	5	5	5	--				
	350-400 MBH - (2) 12x9 Blowers	--				7.5	7.5	7.5	7.5	
	450-500 MBH - (2) 12x12 Blowers	--				10	10	10	10	
	550-600 MBH - (2) 12x12 Blowers	--				10	10	10	10	
	650-700 MBH - (3) 12x9 Blowers	--				10	10	10	10	
Cooling Capacity Stages		37/63/100	33/66/100	30/70/100	36/64/100	31/69/100	33/66/100	25/50/100	33/66/100	
Cooling Compressors	Nominal Tons	4.5/3.0/4.5	4.5/3.0/6.0	4.5/4.5/6.0	4.5/6.0/6.0	4.5/10.0	6.2/6.2/6.2	6.2/6.2/12	10/10/10	
	Qty	3	3	3	3	2	3	3	3	
Cooling Condensers	Face Area	21	17.25	19.1	21	23	23	26.7	38.7	
	Rows	3	3	3	3	3	3	3	3	
	Fans	Qty	2	2	2	2	2	2	3	3
		CFM	9,475	8,487	8,991	9,475	10,000	10,000	13,500	15,000
Evaporator Coils	Face Area	7.3 / 7.3	7.3	10.9	10.9	18.3	18.3	18.3	18.3	
	Rows	2/2	6	4	6	3	4	5	6	
	FPI	12/11	13	13	13	13	13	13	13	
Filter (Qty) and Size (Factory-installed filters are optional.)		(4) 20x25				(6) 20x25				
Net Weight	250 MBH*	lbs	1,260	1,280	1,348	1,416	--			
		(kg)	(572)	(581)	(611)	(642)	--			
	300 MBH*	lbs	1,260	1,280	1,348	1,416	--			
		(kg)	(572)	(581)	(611)	(642)	--			
	350 - 400 MBH	lbs	--				2,190	2,190	2,575	2,900
	(kg)	--				(993)	(993)	(1,168)	(1,315)	
450 - 500 MBH	lbs	--				2,253	2,253	2,638	2,963	
(kg)	--				(1,022)	(1,022)	(1,197)	(1,344)		
550 - 600 MBH	lbs	--				2,397	2,397	2,782	3,107	
(kg)	--				(1,087)	(1,087)	(1,262)	(1,409)		
650 - 700 MBH	lbs	--				1,891	1,891	2,276	2,601	
(kg)	--				(858)	(858)	(1,032)	(1,180)		

* Model RDCA Sizes 78 through 120 with up to 200 MBH are available in Cabinet A. Sizes 78 through 120 with 250 or 300 MBH are available in Cabinet B only.