REZNOR®

SPLIT SYSTEMS

APPLICATIONS

Heating/Cooling/Ventilating

- » WAREHOUSES / FACTORIES
- » SCHOOLS / UNIVERSITIES
- » COMMERCIAL / RETAIL
- » INDUSTRIAL
- » GYMNASIUMS / FITNESS CENTERS
- » CHURCHES / MEETING HALLS
- » COMMUNITY CENTERS
- » HOTEL CORRIDORS
- » KITCHEN / RESTAURANT MAKEUP AIR

Capacities

75	-	400	MBH
10	-	120	kW
500	-	7,500	CFM
1	-	45	Tons
34	-	908	MBH

Matched Split Systems Air Handlers...

Our versatile split systems give you the flexibility that you won't find in a packaged system. The multitude of configurations help you design the mechanical system the way you want it.

The product line also features the first North American, up to 93% efficient, condensing commercial furnace.

Models RHH & SHH

- **The first up to 93% efficient gas heating split system**
- **Environmentally friendly - produces more BTUs per cubic foot of natural gas than any other split system**
- **Heat exchanger technology has over 25 years of field-proven reliability**
- **Ideally suited for the "Optimized Energy Performance" credit through the LEED® Program**

SELECTION GUIDES

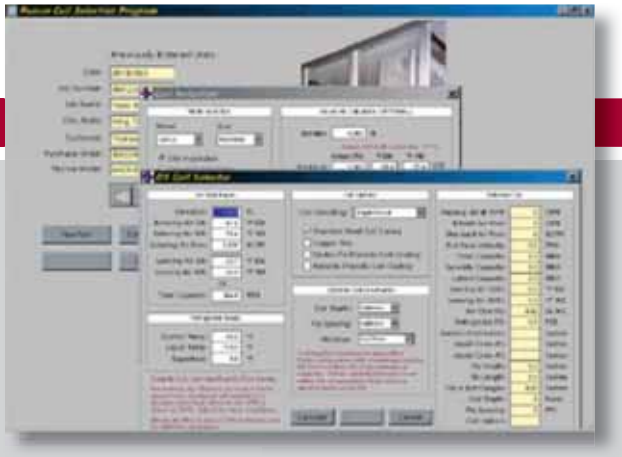
AIR HANDLERS

Type	Model	Heat Capacity	DX Cooling*	CW Cooling	Installation	Configuration	CFM Range
Natural Gas or Propane Heating	PDH	75 - 400 MBH	3 - 45 Tons	3 - 45 Tons	Indoor	Horizontal	500 - 7,500
	RDH	75 - 400 MBH	3 - 45 Tons	3 - 45 Tons	Outdoor	Horizontal	500 - 7,500
	RHH	131 - 345 MBH	3 - 45 Tons	3 - 45 Tons	Outdoor	Horizontal	1,500 - 6,600
	SDH	75 - 400 MBH	3 - 45 Tons	3 - 45 Tons	Indoor	Horizontal	500 - 7,500
	SHH	131 - 345 MBH	3 - 45 Tons	3 - 45 Tons	Indoor	Horizontal	1,500 - 6,600
	CAUA	150 - 400 MBH	5 - 20 Tons	-	Indoor	Vertical	1,600 - 6,600
Electric Heating	PEH	10 - 120 kW	3 - 45 Tons	3 - 45 Tons	Indoor	Horizontal	500 - 7,500
	REH	10 - 120 kW	3 - 45 Tons	3 - 45 Tons	Outdoor	Horizontal	500 - 7,500
No Heat	PXH	-	3 - 45 Tons	3 - 45 Tons	Indoor	Horizontal	500 - 7,500
	RXH	-	3 - 45 Tons	3 - 45 Tons	Outdoor	Horizontal	500 - 7,500
Hydronic Heating	PXH	34 - 908 MBH	3 - 45 Tons	3 - 45 Tons	Indoor	Horizontal	500 - 7,500
	RXH	34 - 908 MBH	3 - 45 Tons	3 - 45 Tons	Outdoor	Horizontal	500 - 7,500

CONDENSING UNITS

Model MASA		60	90	120	150	180	240
Nominal Capacity (Tons)		5	7.5	10	12.5	15	20
BTUH Capacity	Circuit A	22,063	31,183	41,540	57,217	64,334	79,200
	Circuit B	37,928	59,495	82,519	107,290	135,209	159,600

* 5 to 20 ton cooling range with Reznor condensing unit.



Why Use a Custom Coil?

Reznor custom coil design software exactly matches a coil to both the design conditions and to the specific condenser to achieve maximum efficiency and peak performance.

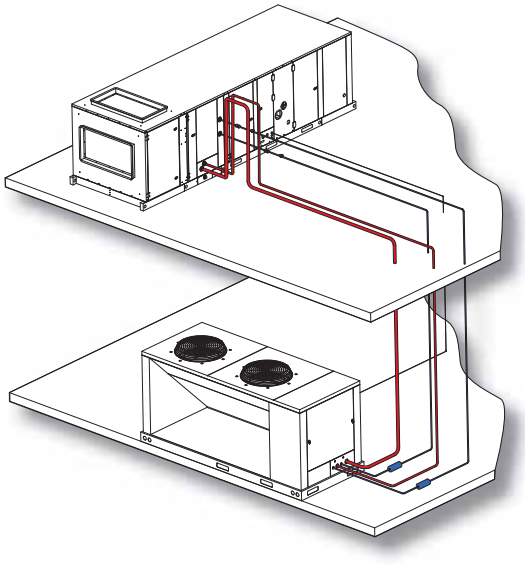
Don't jeopardize your job by using off-the-shelf coils.

HOT WATER | DX | CHILLED WATER

...& Condensing Units

Model MASA

UL1995
CSA 22.2



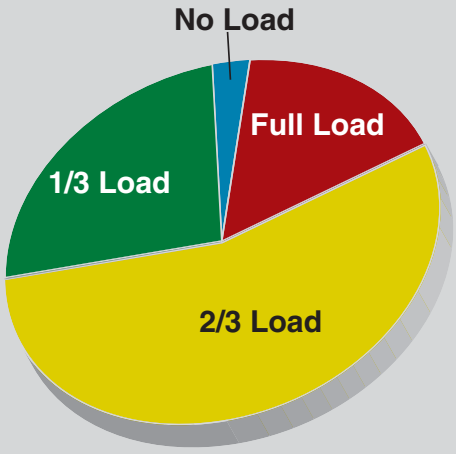
Reznor Model MASA condensing unit is designed to match the cooling capacities for Reznor air handling units.

- **Environmentally conscious**
  - » Energy saving - allows three capacity stages to match changes in load demand
  - » Sustainable - up to 12.3 EER
  - » Ozone friendly - R410A refrigerant
- **Easy installation and service**
  - » Forklift openings for easy lifting
  - » Large panel doors for easy access to components
  - » Heavy gauge base for stability
  - » Corrosion resistant micro-channel coil (easily cleanable)
- **Dependable**
  - » Five (5) year limited warranty on compressors
  - » Pre-coat white high gloss finish - 1,000 hours salt spray
  - » Anti-cycling timers
- **Safety certified**
  - » CE or ETL Listed
- **Capacity controlled**
  - » 3-stage control
  - » Modulated (17% - 100%)
  - » Low Ambient (35°F)

Benefits of DX Capacity Control

With high outside air applications, the cooling load is directly related to the outside air conditions. The chart at the right shows an example of how much the outside air load changes on a design day. You can see, even on a design day in the southeast, how full load is less than 25% of the daily operational hours. Reznor capacity control gives you:

- ► **Lower annual cost than other systems**
- ► **Optimized part load performance**



Daily Demand Load 7:00 AM - 7:00 PM
July - Atlanta, GA

Pre-Engineered Ventilation Airhandler (PREEVA®) - Horizontal

Product versatility to meet your demanding applications

The PREEVA® series units are constructed of modular sections which allows you to select the components that you need for your specific application.

Model PDH/SDH

Standard Features

- ETL Listed to UL-1995 standard
- Precoated white high gloss finish
- Bottom lifting lugs
- Hinged access doors
- Easy to clean, sloped stainless steel drain pan (see top right photo)

Air Moving

- Mixing Box
  - » 6 different mixing configurations
  - » Low leak dampers
  - » 17 different control options
- Outdoor air hood with pre-filters
- Air delivery
  - » Forward curve fan section
  - » Capacity 570 thru 7,500 CFM
  - » ODP or TEFC motors (EISA
  - » Variable frequency drives
  - » Power: 115V/1/60 thru 575V/3/60
- MERV 8, 13 and permanent filters

Heating

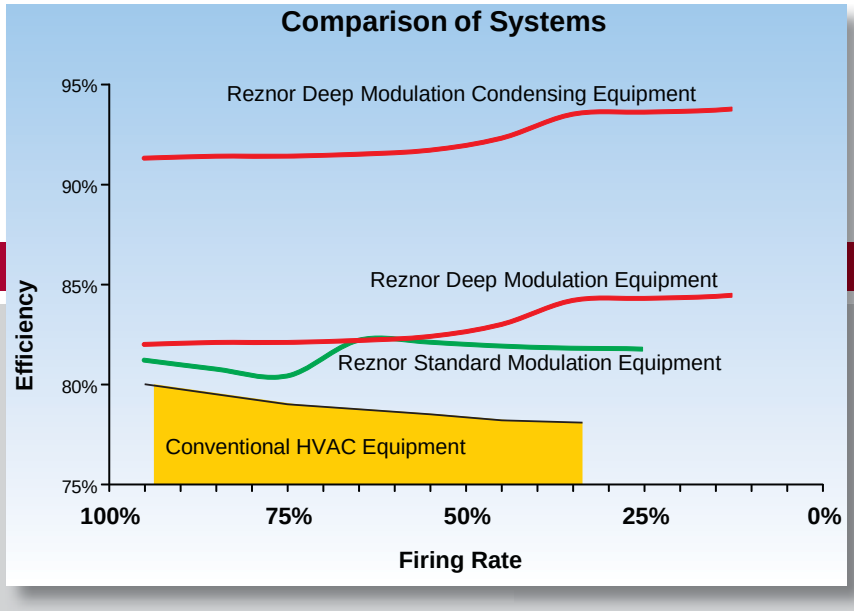
- Natural gas or propane heating
  - » Up to 93% efficient condensing furnace
  - » 83% efficient separated combustion
  - » 81% efficient power vented
  - » Staged control or 4:1 and 8:1 modulation
  - » Heat exchanger material
    - 400 grade stainless steel
    - 300 grade stainless steel
    - TCORE^{CR} steel
- Electric heating
  - » Capacity 10 - 120kW
  - » SCR or staged control
- Hydronic heating
  - » Capacity 34 - 908 MBH
  - » 2 or 4 row coils

Cooling

- Custom DX coil
  - » R410A refrigerant
  - » 1 to 3 staged control
  - » 2 to 6 rows
- Chilled water coil - 4 or 6 rows
- Dehumidification ReHeat Pump™ (PREEVA^{dH})
- Evaporative Cooling
  - » Hybrid evaporative cooling/DX cooling
  - » AquaSaver™ water metering device
  - » 12” glass fiber or cellulose media
  - » Stainless steel cabinetry
  - » Water hammer arrestor

Modulation Efficiency

Total cost of ownership is the truest measure of value for your HVAC investment. The ability to modulate input allows greater control over constantly changing load conditions. Most heating systems lose over 6.25% of their thermal efficiency when modulating. Reznor models start with high efficiency and maintain that efficiency throughout the modulation range to maximize your HVAC investment dollars.



Model RHH

CSA 2.6
ANSI Z83.8

Controls

- Makeup air
- Space control (DDC)
- Thermostat
- User controlled inputs

More Options

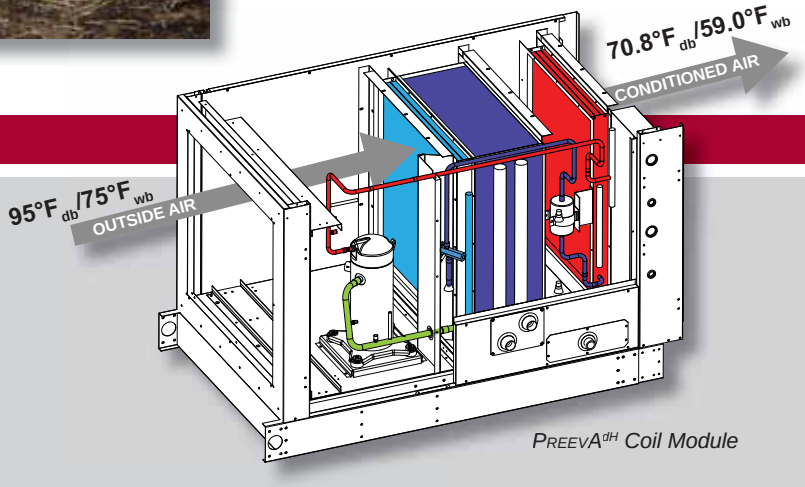
- Single or double wall construction
- Normal or high density insulation
- Discharge flanges, louvers or nozzles
- Roof curbs
- Phase protection
- Smoke detectors and firestat
- Energy recovery interface
- High and low gas pressure switches
- Thermal expansion valve
- Convenient unit mounted or remote disconnect
- High ambient control
- Thermostat and digital control
- BacNet and Lon Communication

Easy Installation and Maintenance

- Hinged doors for easy access
- Slide out burner for inspection and replacement
- Slide-out drain pan for easy cleaning
- Convenient left or right hand controls mounting
- Gauge ports (dH models only)
- 1,000 hour salt spray tested

Split System Dehumidification

The unique Reznor ReHeat Pump system provides consistent, predictable full and part load performance. The design also allows for quick field verification thus insuring proper dehumidification year-round while minimizing energy usage. On light load days, the dedicated reheat system can often meet the operational needs of your building without the main cooling circuit operating.



PREEVA^{dH} Coil Module

Indoor Gas Fired Unit - Vertical

The Reznor Model CAUA packaged heating system is designed to be a versatile solution for space conditioning and/or outside air for ventilation.

With an optional cooling coil, this system is ready to provide year-round comfort for churches, medical offices, retail shops, or storage facilities. Outside supply air capability makes it ideal for printing shops, photo developing facilities, or any place requiring high ventilation rates.

- Heating capacity
  - » 150 to 400 MBH input
  - » Up to 100% outside air capability
  - » Staged heating
- High outside air capability
  - » Heating - efficient gas heating
  - » Cooling - staged control cooling
- Air flow capacity
  - » 1,600 to 6,500 cfm
  - » Total static pressure up to 2”
- Direct or belt driven motor
- DX coils
  - » R410A
  - » 5 to 20 tons
  - » 3 stage control
- Commercial/industrial grade
- Rear, side or bottom inlet air
- Wide range of options including:
  - » Filters
  - » Separated combustion
  - » Stainless steel heat exchanger

Model CAUA with Cased Cooling Coil and Mixing Box

Model CAUA is ideal for

- Churches
- Meeting halls
- Museums
- Retail shops
- Light commercial

Application Case Study:

An old, large HVAC system installed during the building construction had to be replaced. It was so large it wouldn’t fit through any of the doors and had to be dismantled to be removed from the basement.

Problem: Replacing it with a similar unit meant major demolition and reconstruction in order to get it into the building.

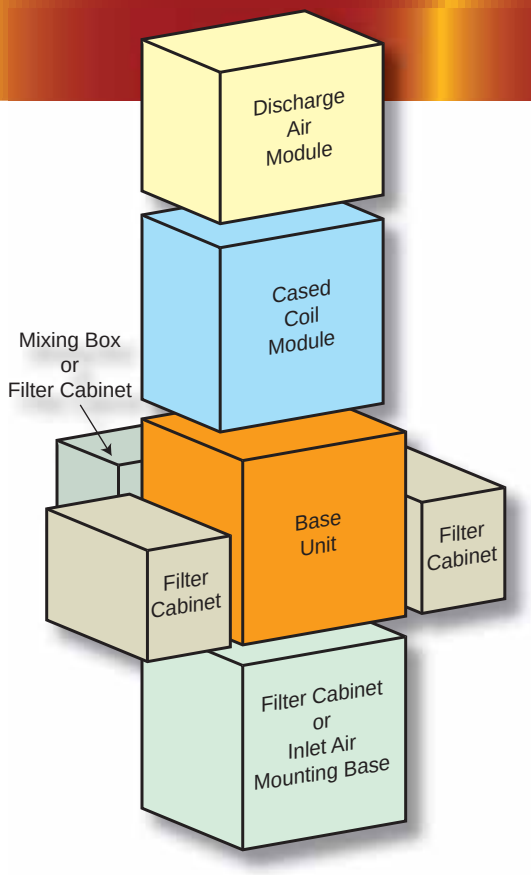
Solution: Multiple Model CAUA units were specified. The CAUA units easily fit through the mechanical room door. These units provided zone conditioning in place of the single zone capacity unit.

Does the Work of “Twinned” Units

Not only can multiple CAUA units be preferable to a single large HVAC unit, a single Model CAUA can be a simple, verifiable solution for commercial applications that previously required “twinning” of two smaller residential units.

- ► **Prewired (no kits required)**
- ► **Single point electrical connection**
- ► **Single gas connection**
- ► **Single supply duct**
- ► **Single vent pipe**
- ► **Higher static pressure capability**

Model CAUA with Inlet Air Mounting Base and Screened Discharge Air Plenum



ANSI Z83.8

CSA 2.6

Model CAUA is designed with a modular concept. By selecting specific modules, you can meet the needs of your specific application. The diagram to the left shows the different options available with a brief explanation below.

- **Discharge air**
  - » Ducted - connect to heater/blower section or cased cooling coil
  - » Non-ducted - 4-way, 3-way or 2-way discharge air plenum
- **Cased cooling coil**
- **Base unit** - heater/blower section
- **Inlet air**
  - » Mixing box - with or without filters, mounted on the rear of the base unit
  - » Filter cabinet - can be mounted on either side, the rear or under the base unit
  - » Inlet air mounting base - couples with the discharge air plenum to form an air turnover system

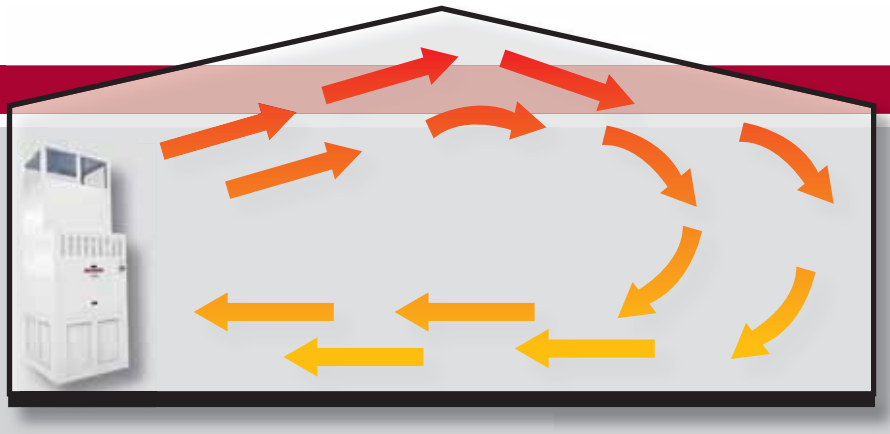
Air turnover is ideal for

- Factories
- Warehouses
- Assembly lines

Air Turnover

Model CAUA can reduce both installed cost and operating cost. By pulling cold air off the floor and circulating heated air through the space continually, energy use is reduced and comfort is increased.

Applies to Models CAUA350 or CAUA400.



Solutions

The Reznor split systems provide solutions for demanding applications. Unlike other products, the systems are carefully designed to meet the specific challenges of:

- High outside air
- Space comfort
- Indoor air quality
- Dehumidification
- Efficient energy use
- Sustainability

Model SDH

Get your FREE custom energy analysis software

Ask your Reznor Agent for details

Makeup Air Application Condensing Furnace Savings

Zone	City State	Annual Savings*	Unit Life Cycle Savings*
8	Anchorage, AK	$2,533	$37,990
8	Fairbanks, AK	$3,247	$48,698
7	Duluth, MN	$2,458	$36,866
7	Calgary, AB	$2,128	$31,919
6	Montreal, QC	$1,874	$28,116
6	Toronto, ON	$1,753	$26,302
6A	Minneapolis, MN	$1,964	$29,467
6A	Milwaukee, WI	$1,905	$28,577
6B	Billings, MT	$1,838	$27,575
6B	Helena, MT	$2,013	$30,188
5	Vancouver, BC	$1,474	$22,116
5A	Buffalo, NY	$1,733	$25,994
5A	Boston, MA	$1,568	$23,517
5A	Pittsburgh, PA	$1,576	$23,633
5A	Chicago, IL	$1,672	$25,073
5B	Boise, ID	$1,631	$24,462
5B	Boulder, CO	$2,221	$33,309
4A	St. Louis, MO	$1,345	$20,173
4A	Philadelphia, PA	$1,396	$20,938
4A	Baltimore, MD	$1,334	$20,013
4B	Salem, OR	$1,495	$22,424
4B	Albuquerque, NM	$1,263	$18,942
4C	Seattle, WA	$1,263	$18,942
3A	Atlanta, GA	$929	$13,930
3A	Dallas, TX	$745	$11,175
3B	Los Angeles, CA	$706	$10,584
3C	San Francisco, CA	$1,200	$18,000
2A	Houston, TX	$538	$8,068
2B	Phoenix, AZ	$502	$7,523
1A	Miami, FL	$85	$1,281

* Savings calculated based on the following conditions: 24 hour operation; Ambient temperature less than 65°F; Discharge air temperature setpoint of 75°F; 3,000 cfm; $1.1 per therm (US), $1.00 per therm (Canada); up to 93% gas efficiency compared to 77% average gas efficiency.

Savings for Canadian cities shown in Canadian Dollars. Savings for U.S. cities shown in U.S. Dollars.

Condensing Technology

Exceeds ASHRAE Std 90.1-2010

ASHRAE Standard 90.1 requires that the equipment properly heat, cool and dehumidify the air while maintaining efficiency at acceptable levels.

The condensing technology takes an 83% efficient systems to 93% or greater. When the standard heating systems are modulated creating efficiencies lower than 77%, the condensing technology maintains its efficiency. More importantly, the efficiency translates to real utility savings. When the annual saving for a 3000 CFM make-up air system is accumulated over a 15 year life expectancy, condensing technology should be considered for all applications.

For complete catalog information including submittals, energy calculations, dimension drawings, and more go to www.ReznorHVAC.com or call 800-695-1901.

Note: In keeping with our policy of continuous product improvement, we reserve the right to alter, at any time, the design, construction, dimensions, weights, etc., of equipment information shown here.

MC-SS-0916

REZNOR®