



**2000-Series**

# **Rapid**<sup>®</sup> *Engineering* LLC

**Direct-Fired Heating, Ventilation and Pressurization Systems**



- Can assist in improved indoor air quality - Pressurization can help exhaust systems operate more efficiently.
- Augment existing ventilation system - Air handler can be designed to automatically modulate outdoor air volume from 20% to 100% to help meet ventilation requirements in cold weather and decrease heat buildup in warm weather.
- Operation flexibility - Fan only operation allows free ventilation cooling, reducing indoor air temperatures to help keep people and processes productive.
- Flexibility and convenience - Heating systems require little to no ductwork and can be installed indoors or outdoors.

**1.800.536.3461**  
**www.rapidengineering.com**



**Intertek**

CANADA: 100% OUTSIDE AIR ONLY

# RAPID<sup>®</sup> 2000-Series

## RAPID<sup>®</sup> 2000-Series air handlers improve indoor air quality and provide air comfort.

RAPID<sup>®</sup> 2000-Series air handlers can be designed to efficiently establish and maintain a slightly pressurized condition in your facility as outdoor air is gently tempered and, as required, mixed with existing indoor air.

Model	2005	2010	2010B	2020	2030
CFM	1,000 - 4,000	4,000 - 10,000	7,000 - 14,000	12,000 - 25,000	25,000 - 40,000
Output [MBH]*	NG	97 - 389	432 - 800	1,296 - 2,700	2,700 - 4,320
	LPG	76-302	346-800	605-1,210	1,037-2,160

\*1 MBH = 1,000 Btu/h. Output range indicated at maximum temperature.

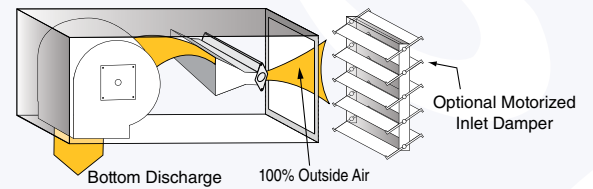
## Model Styles

### Make-Up Air (MUA)

**Design:** 100% outdoor air with a fixed discharge air volume.

**Function:** Supplies direct replacement air for building mechanical exhaust.

**Application:** Used as make-up air for industrial processes which incorporate mechanical exhaust.

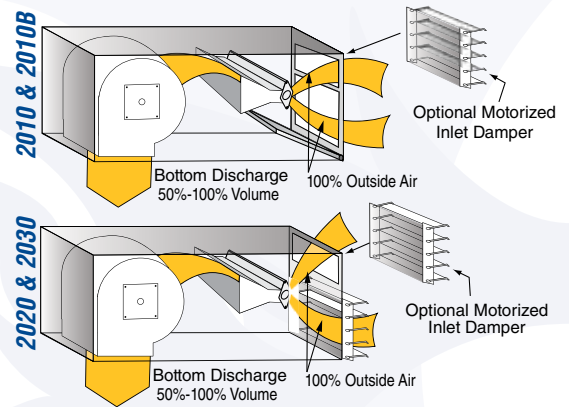


### Variable Air Volume (VAV)

**Design:** 100% outdoor air with a variable discharge air volume from 50% to 100% of total capacity.

**Function:** Automatically responds to building pressure and temperature needs.

**Application:** Used in industrial and commercial buildings that have air quality and specific air management requirements.

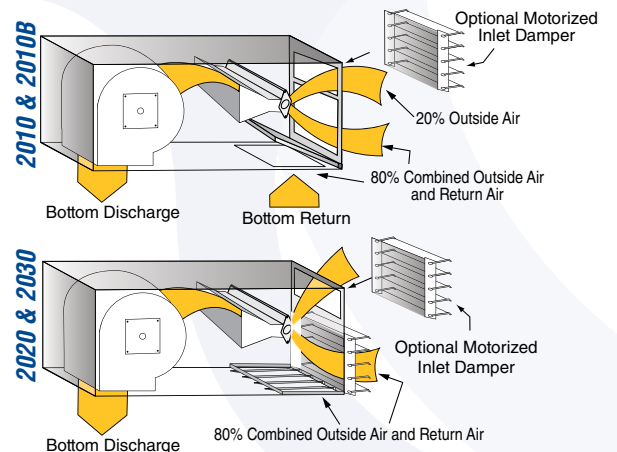


### Air Management (AM)

**Design:** Variable outdoor air / return air ratio within the range of 100% outdoor air / 0% return air to 20% outside air / 80% return air. Discharge air volume is fixed.

**Function:** Automatically responds to building pressure and temperature needs.

**Application:** Used in industrial and commercial buildings that have air quality and specific air management requirements.

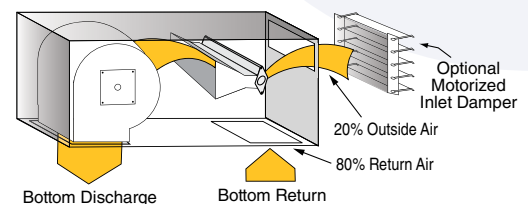


### Fixed Recirculation (FR)

**Design:** Fixed 80% return air and 20% outdoor air. Discharge air volume is fixed.

**Function:** Provides efficient, low-cost heating where minimum ventilation rates are required.

**Application:** Used in warehouses, distribution centers, retail outlets, etc.



# RAPID<sup>®</sup> 2000-Series Features



## Reliable, Efficient System Operation Provided by:

- 30:1 fully modulating burner that maintains 100% combustion efficiency.
- Double-width, double-inlet, forward-curved centrifugal fan built for long life.
- Energy-saving ignition system.
- Electronic fuel modulation providing immediate response.
- UV scanner for excellent reliability and durability. (Not available on 2005).
- Operation of fan only in warm weather to enjoy free ventilation cooling.
- Compliance to ETL per ANSI Z83.18 or Z83.4 standards.

## Long Lasting Construction Provided by:

- Heavy-duty, corrosion-resistant, galvanized steel construction.
- Sturdy, integral frame that is screwed and bolted together for durability and longer service life.
- Unpainted galvanized steel or white finishes available.
- Heavy-duty, factory-installed motor and drive package designed for long-lasting performance.
- Heavy-duty, pre-lubricated bearings provide up to 30,000 hours of ABMA L-10 performance.

## 2000-Series Controls Options:

- Discharge temperature or room temperature controls available.
- Interlock to existing building management system or other remote devices.
- Mild weather stat.
- Low-temperature stat with bypass timer.

## Ease of Maintenance Provided by:

- Large access panel for easy maintenance of blower, motor, drives and burner.
- Blower installed downstream of burner for convenient access.

## Other 2000-Series Options:

- 19" (48 cm) roof curb simplifies rooftop mounting.
- Inlet hood protects against water entrainment and is available with permanent filters, bird screen or moisture limiter media.
- Filter section with disposable or permanent filters for longer equipment life of internal components.
- Motorized inlet damper for exfiltration control.
- FM compliant gas trains.
- Upright heater stand or legs of varying heights.

## Typical Installations



Mezzanine-Supported	Roof-Mounted	Upright Indoor	
Suspended (Wall or Roof Inlet)	Horizontal on Legs (Indoor or Outdoor)	Upright Outdoor	
<b>LEGEND</b>	OA = Outside Air	DA = Discharge Air	RA = Return Air

**NOTE:** All models are available in upright or horizontal, as well as indoor or outdoor configurations.

# RAPID® 2000-Series Controllers



**Basic Remote**

This control is used for make-up air and space heating. The discharge temperature of the heater remains constant as selected on the selection dial. The burner flame is modulated by a discharge temperature control, which is governed by the remote temperature selector.

**FAN ON/BURNER ON Mode:**

Heater can operate continuously for building exhaust air replacement and space heating by maintaining a constant discharge temperature.

**FAN ON/BURNER OFF Mode:**

The blower can operate without the burner for summer ventilation.

**Dimensions:**

10" (25.4 cm) L x 10" (25.4 cm) W x 4" (10.2 cm) D NEMA 1 enclosure.



**Standard Discharge Control Remote (SDC)**

This control is used for make-up air and day/night heating of the building. The discharge temperature of the heater remains constant as selected on the selection dial. The burner flame is modulated by a discharge temperature control, which is governed by the remote temperature selector.

**AUTO/WINTER Mode:**

Heater cycles on/off to maintain space temperature as selected on the thermostat.

**ON/WINTER Mode:**

Heater can operate continuously for building exhaust air replacement and space heating by maintaining a constant discharge temperature.

**ON/SUMMER Mode:**

The blower can operate without the burner for summer ventilation.

**Dimensions:**

10" (25.4 cm) L x 10" (25.4 cm) W x 4" (10.2 cm) D NEMA 1 enclosure.



**Deluxe Temperature Control Remote (DTC)**

This control is used for make-up air and total automatic "day/night" heating of the building. A solid-state modulating room Selectrastat fully modulates the burner flame to maintain space temperature and compensate for changing building heat losses or gains.

**AUTO/WINTER Mode:**

Occupied time: Heater can operate continuously, fully modulating Btu/h output to maintain space temperature as selected on the Selectrastat.

Unoccupied time: Heater cycles on/off to maintain space temperature as selected on the programmable thermostat (night setback).

**ON/WINTER Mode:**

Heater can operate continuously, fully modulating Btu/h output to maintain space temperature as selected on the Selectrastat.

**ON/SUMMER Mode:**

The blower can operate without the burner for summer ventilation.

**Dimensions:**

10" (25.4 cm) L x 10" (25.4 cm) W x 4" (10.2 cm) D NEMA 1 enclosure.

**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.

**This product is not for residential use.**

**This document is intended to assist licensed professionals in the exercise of their professional judgment.**

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