

# Direct-Fired Booth Heating Systems

*Fresh Make-Up Air for  
Spray Safety & Quality*

*Heated Curing Air for  
Bake Speed & Economy*



Pure and Simple Solutions

# Spray & Bake



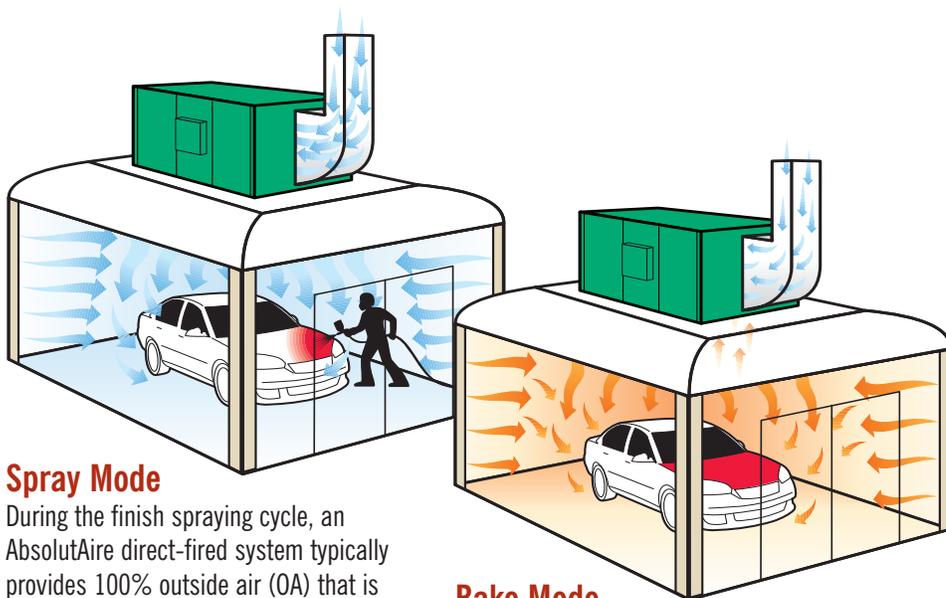
# Spray & Bake

## AbsolutAire's Direct-Fired Booth Heating Systems

**D**irect-Fired Booth Heating Systems provide precise ventilation and temperature control for both custom-finishing operations as well as dedicated paint booth or spray booth applications.

AbsolutAire® Spray & Bake systems are among the best. In the Spray Mode, they deliver fresh make-up air for high-volume, low-temperature ventilation that enhances operator safety and finish quality. In the Bake Mode, they deliver heated curing air for high-temperature ventilation that speeds finish drying and increases booth productivity.

Committed to *Complete Customer Satisfaction*, AbsolutAire offers a range of system choices, as well as selected options such as cooling and humidity control, for custom-matching Spray & Bake performance with specialized booth-operating requirements.



### Spray Mode

During the finish spraying cycle, an AbsolutAire direct-fired system typically provides 100% outside air (OA) that is tempered to between 60° and 90°F and supplied in constant high volumes for maximum booth ventilation.

### Bake Mode

During the finish baking cycle, an AbsolutAire direct-fired system typically provides either reduced-volume 100% outside air (OA) or a higher-volume 80/20 blend of recirculated air (RA) and outside air (OA) that is heated to between 80° and 200°F and supplied to reduce finish drying and curing times.



### AbsolutAire Advantages

#### Superior Spray & Bake Performance

- ▲ Make-Up Air Capacities for Booth Ventilation up to 50,000 CFM
- ▲ Heating Capacities for Finish Curing Temperatures up to 200°F
- ▲ Energy-Efficient, Economical Operation
- ▲ Precise Digital Control Sequences

#### Maximum Application Versatility

- ▲ Constant High or Reduced Airflow Volumes
- ▲ Fueled with Natural or LP Gas
- ▲ Options for Cooling, Humidity Control, Multiple-Stage Filtering, and More
- ▲ Custom-Matched to Booth Requirements

#### Low-Cost System Installation

- ▲ Indoors or Out, Upright or Horizontal
- ▲ Fully Assembled, Pre-Piped and Wired

#### Exceptional Technical Support

- ▲ ETL-Certified to ANSI Design Standards
- ▲ Exclusive Parts & Labor Limited Warranty

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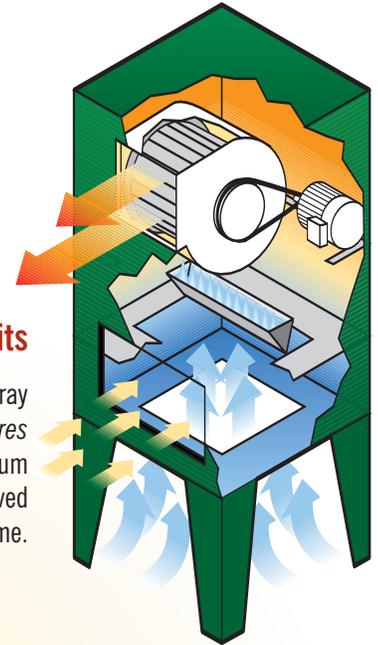


## High-Performance Spray & Bake Finishing Solutions

AbsolutAire direct-fired Spray & Bake finishing solutions provide outstanding results in all types of spray booths, including downdraft, semi-downdraft, and crossdraft. System and product configurations are designed and built to exact application requirements for precise booth conditioning needs.

### Standard Units

These Spray & Bake systems are most economical and versatile for spray booth applications with *low-to-moderate finish-curing temperatures (80° to 140°F)*. Uniform airflow across the burner ensures maximum fuel efficiency, while “draw-through” ventilation with a forward-curved centrifugal fan ensures precise air-delivery volume.



### High-Temperature Units

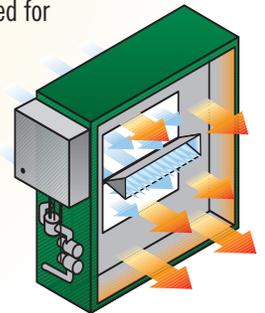
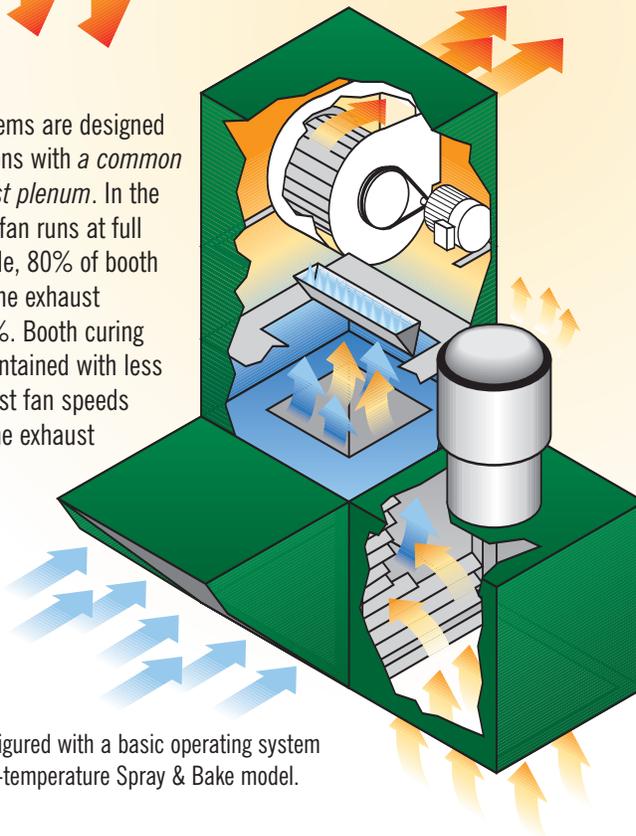
These Spray & Bake systems are robust, especially equipped for spray booth applications with *moderate-to-high finish curing temperatures (up to 200°F)*. A modulating airflow burner and backward-inclined airfoil fan save energy, while a direct-drive fan motor without belts or bearings inside the cabinet increases reliability.

### Burner Boxes

Direct-fired burner and gas-train assemblies are designed for easy installation into booth ventilation systems that require *heating for either make-up air or finish-curing air*. These are piped and wired for user install, or the burner can be mounted in a sleeve with its profile properly sized for efficiency and safety.

### R-E-P Units

These Spray & Bake systems are designed for spray booth applications with a *common recirculation-and-exhaust plenum*. In the spray mode, the exhaust fan runs at full capacity. In the bake mode, 80% of booth air is recirculated while the exhaust volume is reduced to 20%. Booth curing temperatures can be maintained with less fuel, and the lower exhaust fan speeds require less electricity. The exhaust fan variable-speed drive (VFD) is controlled by a manual potentiometer or booth-pressure switch.



**NOTE:** R-E-P Units are configured with a basic operating system of either a standard or high-temperature Spray & Bake model.

# Spray & Bake

## Advantage: AbsolutAire

Innovation and advanced technology shape AbsolutAire's direct-fired booth heating systems. These high-performance solutions for meeting today's finishing challenges deliver complete customer satisfaction.

**Pure & Simple:** AbsolutAire Spray & Bake systems offer *The Best Available Value* with impressive competitive advantages.

### Superior Performance

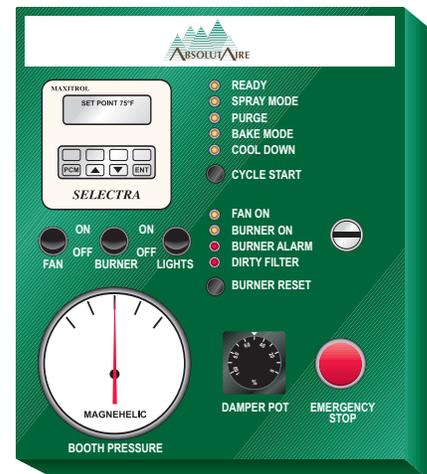
Performance starts with capability. And, AbsolutAire Spray & Bake models are most capable for both custom-finishing operations as well as paint or spray booths of all types and sizes. They offer:

- ▲ Make-up air capacities from 6,000 to 50,000 CFM for meeting ventilating needs with either constant high or reduced airflow volumes.
- ▲ Heating capacities for matching spray-cycle temperatures from 60° to 90°F, and bake-cycle temperatures from 80° to 200°F.
- ▲ An almost 100% efficient, modulating airflow burner and, on some models, an economical airfoil fan that requires less horsepower.
- ▲ A 30:1 burner turndown capability and a low-maintenance cast-aluminum manifold with non-clogging, stainless steel mixing plates.
- ▲ A selection of digital-control packages for precise system-operation sequences, including spray, purge, bake, and cool down.

### Maximum Versatility

One size doesn't fit all, so AbsolutAire Spray & Bake models provide uncommon design flexibility for meeting today's varied finishing needs. Some of the versatility includes:

- ▲ Economical efficiency using either natural gas or liquid propane.
- ▲ Precisely matched booth-ventilation and finish-curing fan speeds with Variable Frequency Drives (VFD's).
- ▲ System designs with either constant 100% outside air (OA) or blends of booth recirculated air (RA) and outside air (OA).
- ▲ Impressive options for cooling, humidity control, filtering fresh and recirculated air, and much more.
- ▲ Custom-matching system capacities, capabilities, and controls to specialized operations or cutting-edge booth designs.



**Digital-control options** include a spray-only package, spray-and-bake standard controller, specialty controller with photohelic gauge, or a touch-screen PLC-type system control

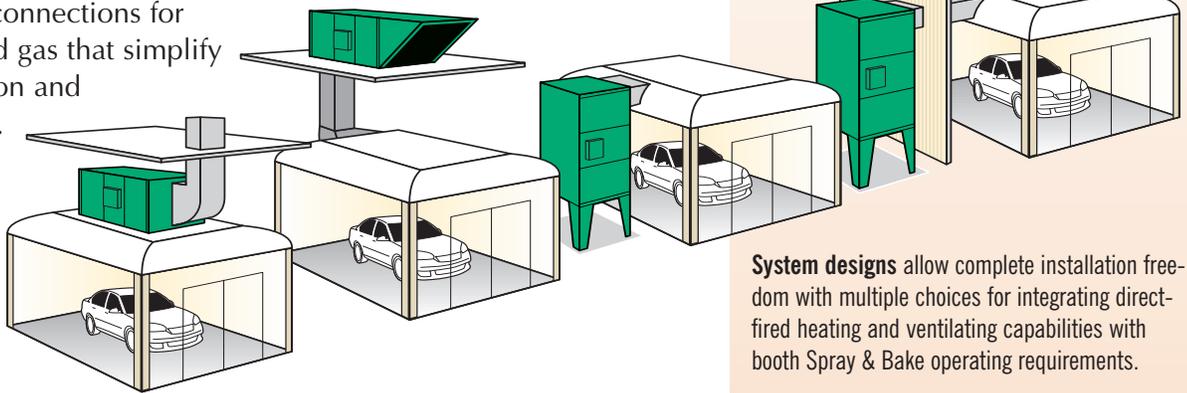


**Cleanable or replaceable filters** for incoming fresh air or recirculated conditioned air are readily accessible for service.

## Low-Cost Installation

Time is money, and AbsolutAire Spray & Bake models are built for quick and easy installation and seamless integration into all types of finishing operations and booth applications. They feature:

- ▲ Upright and horizontal system designs, which can be installed indoors or out to easily meet facility and floor-plan needs.
- ▲ Unitized construction with airflow and control strategies that minimize ductwork runs and specialized mechanicals.
- ▲ Ready-to-install assemblies that are pre-wired and piped, and require only minimal adjustments for static pressure drops.
- ▲ Single-point connections for electricity and gas that simplify unit installation and speed startup.



System designs allow complete installation freedom with multiple choices for integrating direct-fired heating and ventilating capabilities with booth Spray & Bake operating requirements.

## Exceptional Support

Providing the *Best Available Value* in direct-fired solutions for finishing excellence means exceeding expectations. And, AbsolutAire Spray & Bake models do exactly that. Each is:

- ▲ Competitively priced and efficiently built with only the best UL, CSA, or AGA listed components.
- ▲ Factory-tested for safe and reliable operation to meet NFPA codes and standards.
- ▲ Intertek ETL-certified to ANSI design standards for occupied spray mode; CSA standards for constant and variable outside air models; and UL listings for unoccupied bake mode.
- ▲ Simple to service with an external power disconnect switch and easy access to all operating components.
- ▲ Backed by an exclusive two-year parts and 90-day labor limited warranty; among the best in the industry.



All wiring, piping, and electrical- and gas-control components are expertly assembled in modules behind sealed, easy-access panels.



# Spray & Bake

## Model Performance & Selection

### Standard Units (AA-Series)

Economy and versatility are key features of these Spray & Bake units, based on AbsolutAire's AA-Series with "draw-through" ventilation. Operating capabilities include:

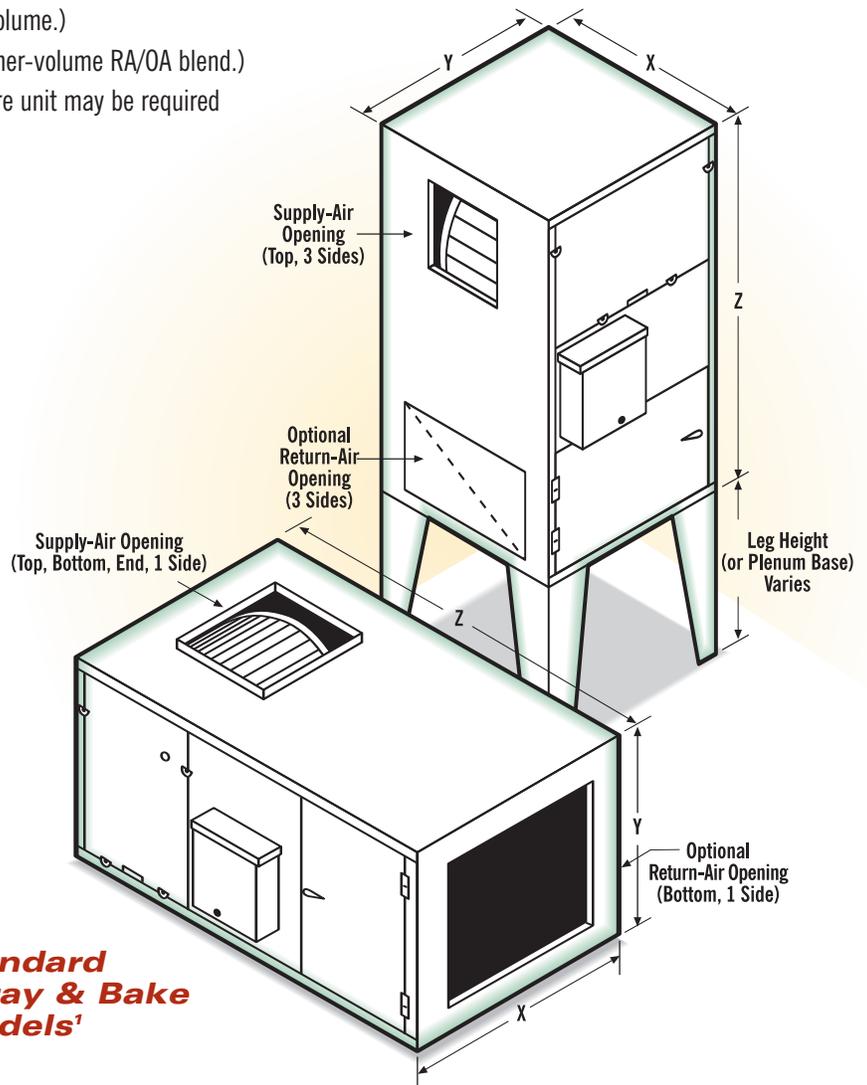
- ▲ Spray @ 60° to 90°F (100% outside air, constant high volume.)
- ▲ Bake @ 80° to 140°F (Reduced-volume 100% OA or higher-volume RA/OA blend.)
- ▲ Booth @ 100° to 140°F (A Return-Air or High-Temperature unit may be required to achieve a booth temperature of 140°F.)

### Key Features

- ▲ Modulating Burner with 30:1 Turndown Capability Allows Precise Temperature Control.
- ▲ Forward-Curved Centrifugal Fan with Heat-Shielded VFD-Motor Ensures Precise Ventilation Control.
- ▲ Digital Controller Automates Spray & Bake Operating Sequences.
- ▲ Multiple Choices for Supply-Air Discharge and Recirculated-Air Return Simplify Installation.

### Available Options

- ▲ Booth Pressure Gauge or Damper Potentiometer Control Airflow Volumes.
- ▲ Chilled-Water and DX Coils and Evaporative Media Deliver Cooling and Humidity-Control Capabilities.
- ▲ Exhaust Fan Motor Starters and Interlocks Allow Complete Booth System Integration.
- ▲ Insulated Cabinets with Double-Wall Construction Provide Quiet Operation and Reduce Heat Loss.



### Standard Spray & Bake Models<sup>1</sup>

CAPACITIES		Models	Dimensions, Inches <sup>4</sup>		
CFM <sup>2</sup>	MBH <sup>3</sup>		X	Y	Z
9,000	1,125	AA3	48	38	92
14,000	2,025	AA4	55	47	92
20,000	2,800	AA5	74	54	102
25,000	2,770	AA6	74	54	102
35,000	4,900	AA7	90	70	138
50,000	6,000	AA8	90	70	138

#### NOTES:

- <sup>1</sup> AA-Series models for "Spray & Bake" applications; others are available.
- <sup>2</sup> Motor sizes for a specific CFM capacity will vary with application static pressures.
- <sup>3</sup> MBH Capacities are dependent on unit configurations and type of fuel used.
- <sup>4</sup> Dimensions are approximate and can change with installation requirements.

## High-Temperature Units (R-Series)

Robust and especially equipped for high curing temperatures, these Spray & Bake units are based on AbsolutAire's R-Series and feature an energy-saving airfoil fan and externally mounted, direct-drive motor. Operating capabilities include:

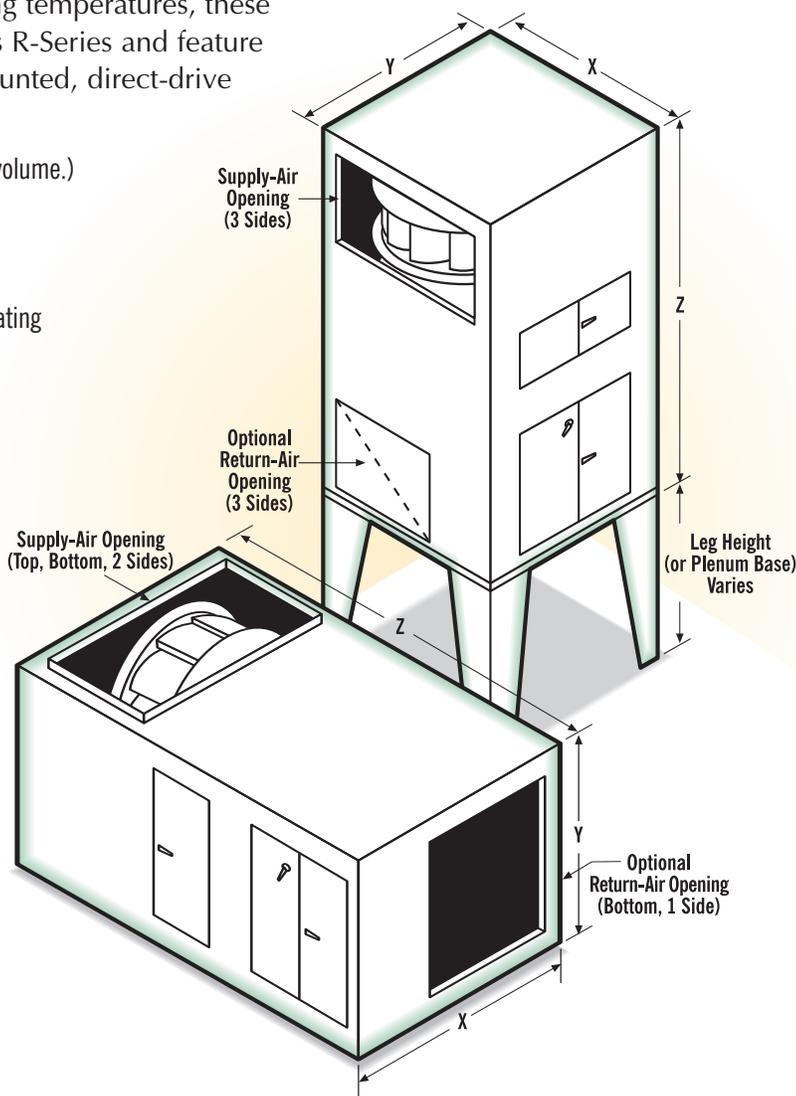
- ▲ Spray @ 60° to 90°F (100% outside air, constant high volume.)
- ▲ Bake @ 80° to 200°F (Reduced-volume 100% OA or higher-volume RA/OA blend.)
- ▲ Booth @ 140° to 180°F (A R-E-P system, with common recirculation and exhaust plenum base, can reduce operating costs and deliver higher booth temperatures.)

### Key Features

- ▲ Pre-Mix Solid-State Burners (30:1 Turndown) Feature Low Emissions and Almost 100% Fuel Efficiency.
- ▲ Backward-Inclined Airfoil Plenum Fan Requires up to 40% Less Brake Horsepower for Specified Ventilation.
- ▲ Externally Mounted, Direct-Drive Motor Ensures Reliability Without Belts or Bearings in the Air Stream.
- ▲ Double-Wall Floors, Structural-Steel Framing, and Thermal Insulation Provide Quiet Durability.

### Available Options

- ▲ Digital Control Packages Range from Manual to Fully Automated, Including Touch-Screen PLC Displays.
- ▲ Motorized Inlet, Supply-Air, and Recirculated-Air Dampers Allow Automated Ventilation Control.
- ▲ Multiple Filtering, Cooling, and Humidity-Control Choices Tailor Systems to Specific Finishing Needs.
- ▲ Plenum Bases for Upright Models Provide Common Recirculation and Exhaust Capabilities.



CAPACITIES		Models <sup>4</sup>	Dimensions, Inches <sup>5</sup>		
CFM <sup>2</sup>	MBH <sup>3</sup>		X	Y	Z
14,000	1,720	R327/R427	56	53	118
19,000	2,250	R330/R430	66	63	126
25,000	2,915	R336/R436	66	63	126
30,000	3,975	R340/R440	74	71	130
35,000	4,640	R344/R444	84	81	140
40,000	5,305	R349/R449	84	81	140
40,000	6,630	R354/R454	92	89	153

### Standard Spray & Bake Models<sup>1</sup>

#### NOTES:

- <sup>1</sup> R-Series models for "Spray & Bake" applications; others are available.
- <sup>2</sup> Motor sizes for a specific CFM capacity will vary with application static pressures.
- <sup>3</sup> MBH Capacities are dependent on unit configurations and type of fuel used.
- <sup>4</sup> R400 models feature tubular framing with standing-seam, double-wall construction.
- <sup>5</sup> Dimensions are approximate and can change with installation requirements.

# Other *Pure and Simple Solutions:*

- ▲ S-Series Air-Handling Systems
- ▲ R-Series Direct-Fired Heating & Ventilating
- ▲ AA-Series Direct-Fired Heating & Ventilating
- ▲ V-Series Direct-Fired Make-Up Air Value
- ▲ CH-, DH- & APD-Series Space Heaters
- ▲ Coil & Evaporative Cooling Systems

Represented by:



5496 North Riverview Drive • Kalamazoo, MI 49004  
Phone: (800) 804-4000 • Fax: (269) 382-5291

[www.absolutaire.com](http://www.absolutaire.com)