

# BANANZA

## Direct-Fired Heating, Ventilation and Pressurization Systems



### B-Series

- 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.

**1.800.255.3416**  
**www.bananza.com**



CANADA: 100% OUTSIDE AIR ONLY

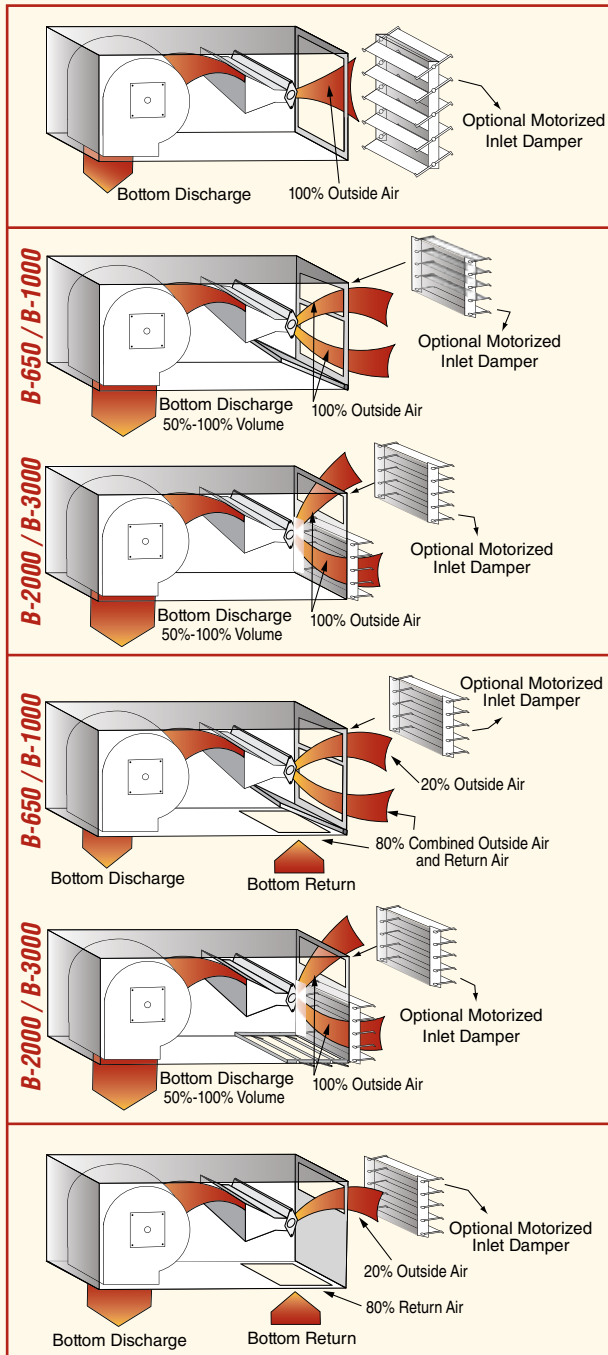
# BANANZA® B-Series

BANANZA® B-Series air handlers help improve indoor air quality and help provide air comfort. BANANZA® B-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		B-350	B-650	B-1000	B-2000	B-3000
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	456-1,404	1,296-2,700	2,700-4,320
	LPG	76-302	346-800	605-1,210	1,037-2,160	2,160-3,456

\* 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 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% outdoor 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.

# BANANZA® B-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 B-350)
- 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.

## B-Series Conventional Controls' Options:

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

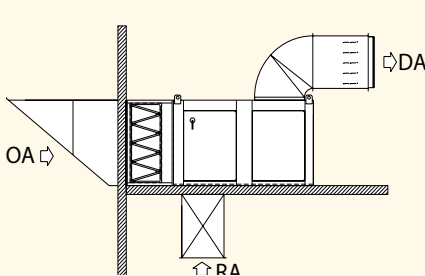
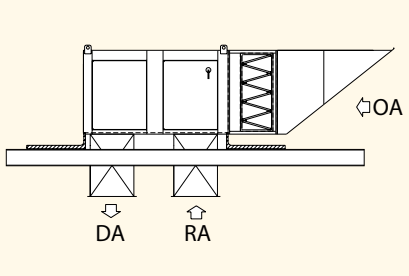
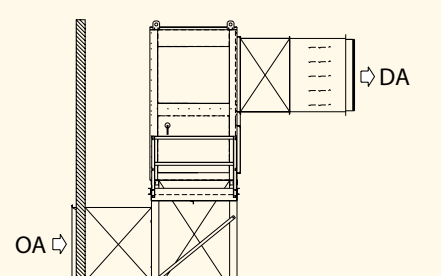
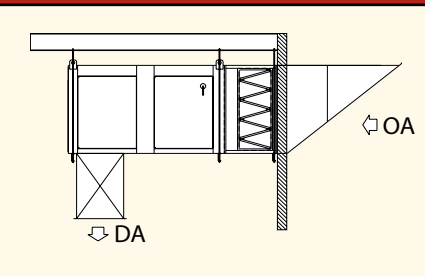
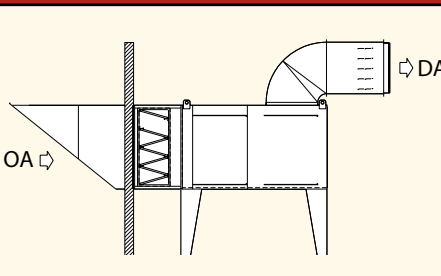
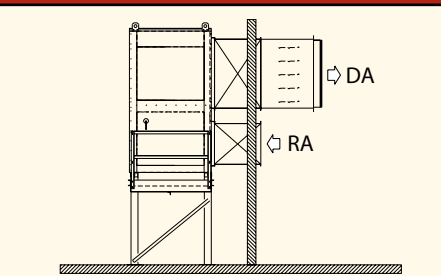
## Ease of Maintenance Provided by:

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

## Other B-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
		
Legend		
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.

# Remote Panels



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

**Further Information:** Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through BANANZA® 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.**

## Bananza

1100 Seven Mile Road NW  
Comstock Park, MI 49321  
Telephone: +1.616.726.8800  
Toll Free: 800.255.3416  
Fax: +1.616.784.0435

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

© 2016 Roberts Gordon LLC

All rights reserved. No part of this work covered by the copyrights herein may be reproduced or copied in any form or by any means – graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems– without written permission of Roberts Gordon LLC.