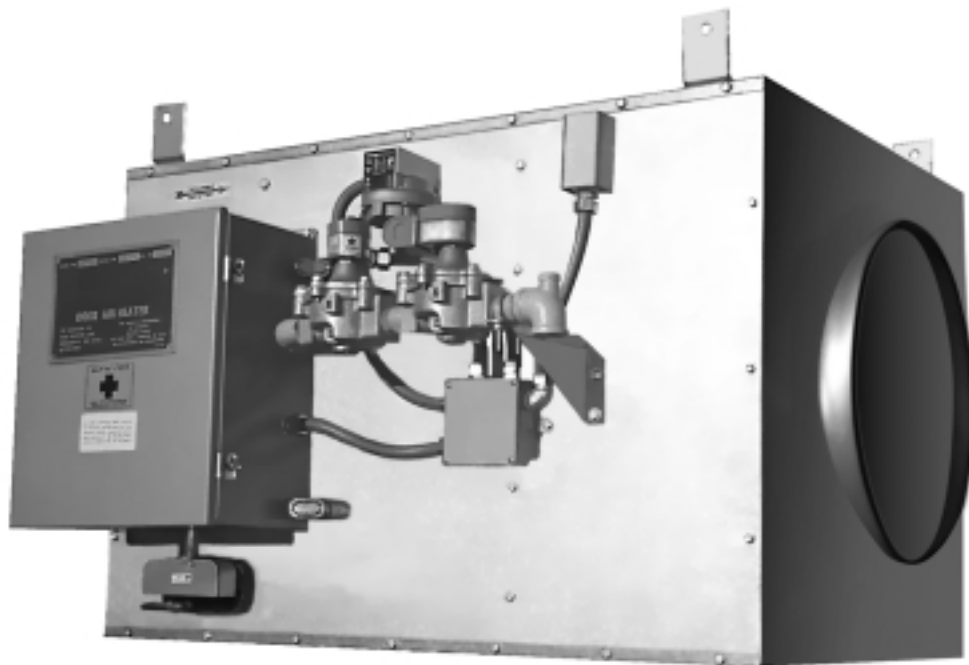**Aerovent**

GAS DOOR AIR HEATERS

- *Solve Loading Dock Heating Problems*
- *Temper Blast of Cold Air When Overhead Door is Open*
- *Compact Packaged Construction*
- *Easy Installation*
- *Direct Gas-Fired Heating For Maximum Efficiency*

Application

The Aerovent Automatic Door Air Heater tempers the sudden influx of cold air when an overhead door is open. To mix hot and cold air, it is necessary to create a highly turbulent condition directly in front of the door. The Door Air Heater provides a high velocity blast of hot air to mix with the sudden influx of cold air — "bore through it" — and splash off the floor.

Most unit heaters and slotted duct systems do not have sufficient power to break completely through this "river" of cold air. The Aerovent unit will do the job effectively, economically and instantaneously. The heater is ready to go at all times. As soon as the door raises far enough to trip the switch, the fan starts; a few seconds later there is full heat — no warm-up, no delay. When the door is closed, heat and fan shut off together. The unit operates only when auxiliary heat is required.

Each heater is completely assembled, factory adjusted and comes as a package ready for connection to electrical supply and fuel line. Installation is simple; no adjustments are necessary to place it in operation.

There are two basic units available with a wide selection of heating capacities and optional features.

- The 6200 CFM unit is designed to cover a 12' x 12' door opening. Its outlet velocity is 3500 FPM.
- The 4100 CFM unit has an outlet velocity of 2300 FPM. It is suitable for use on smaller doors or where head room clearance is low.

"N" models are designed to operate on natural gas or a 1300 Btu propane-air mixture. "P" models are for use on propane gas only. Burners on "P" models are not suitable for natural gas.

Complete safety is assured:

- The flame is supervised by an electronic protector safety relay.
- A velocity monitor measures airflow through the venturi.
- A high limit switch eliminates the danger of accidental overheating.
- Additional components in the operating control system are panel mounted in a NEMA 12 dust resistant enclosure.
- Wiring and control strips are clearly marked and the electrical layout and design meets National Electrical Code Standards.

Units feature the Aerovent S7 Blade Macheta® airfoil propeller fan and specially designed discharge orifice, which delivers the powerful air blast necessary to provide effective door air heating.

Note: The Door Air Heater is designed for intermittent service and is not recommended for continuous service as a make-up air unit.

Options

Burner – For use with propane gas.

IRI Piping Arrangement – Includes safety shut-off valve, blocking valve, vent valve, high and low gas pressure switches, gas pressure gauge, pilot ignition, and non-recycle flame relay.

FM Piping Arrangement – Includes safety shut-off valve with position indicator, high and low gas pressure switches, gas pressure gauge, pilot ignition and non-recycle flame relay.

FM / IRI Piping Arrangement – Includes safety shut-off valve with position indicator, blocking valve, vent valve, high and low gas pressure switches, gas pressure gauge, pilot ignition and non-recycle flame relay.

Control Enclosure Disconnect Switch – Nonfused.

Two-Stage Regulator – For selection of high or low firing rate with selector switch or thermostat.

Ultraviolet Flame Sensor – For use where moisture conditions exist. Required for car wash applications.

Motorized Inlet Damper – Center-pivoted type with motor and end switch, mounted and wired.

Directional Discharge Grille – Four-way manually adjustable. Size 21" x 21".

Discharge Elbow – 90° with turning vanes.

Weathertight Enclosure – For pipe train and control panel.

Horizontal Inlet Hood – 45° angle less turning vanes.

Vertical Inlet Hood – Tu-WAY head with or without curb base.

Welded Unit Construction With Gray Enamel Finish – Offers welded seams and painted finish as opposed to galvanized finish and bolt-together construction.

Performance Data

Aerovent certifies that the Gas Door Air Heaters shown on these pages have been tested and rated in accordance with industry accepted test codes, and are guaranteed by the manufacturer to deliver rated performance.

CATALOG NUMBER				INPUT BTU	NOMINAL TEMP. RISE	GAS PRESSURE	OUTLET VELOCITY	CFM
PROP	FAN TYPES	RPM	HP					
24S728	NDH PDH	1160	3/4	325,000 440,000 580,000	73°F 99°F 131°F	1 oz. 2 oz. 3 oz.	2300	4100
24S728	NDH PDH	1750	2	440,000 580,000 680,000 790,000 870,000 990,000	66°F 87°F 102°F 118°F 130°F 148°F	2 oz. 3 oz. 4 oz. 5 oz. 6 oz. 7 oz.	3500	6200

Mounting Positions

Mounting Positions

IMPORTANT: Do not mount unit with control box upside down or on the bottom.

Horizontal   Angular   Vertical
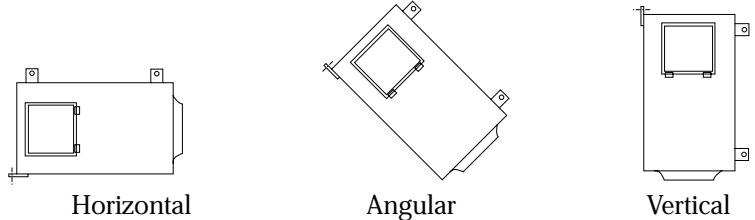
Installation

Interior Installation

Mounted at a 45° angle, the Aerovent door air heater directs hot air to the floor area just inside of the doorway. The heater is turned on by the door switch when the door is opened.
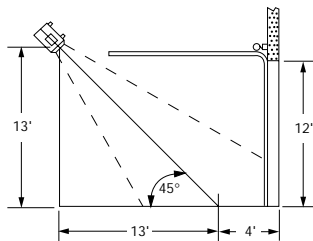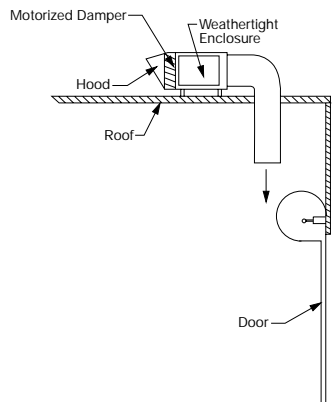
Alternate vertical door air heaters may also be used with roll top or straight lift doors, directing a flow of warm air to the floor just inside of the door opening.
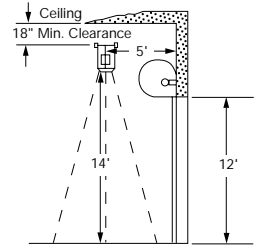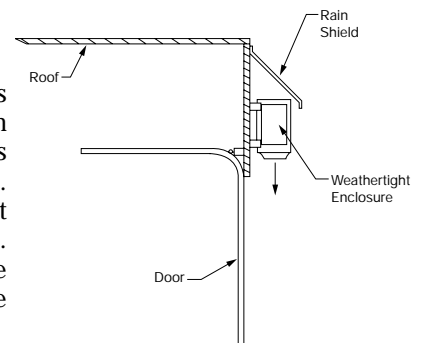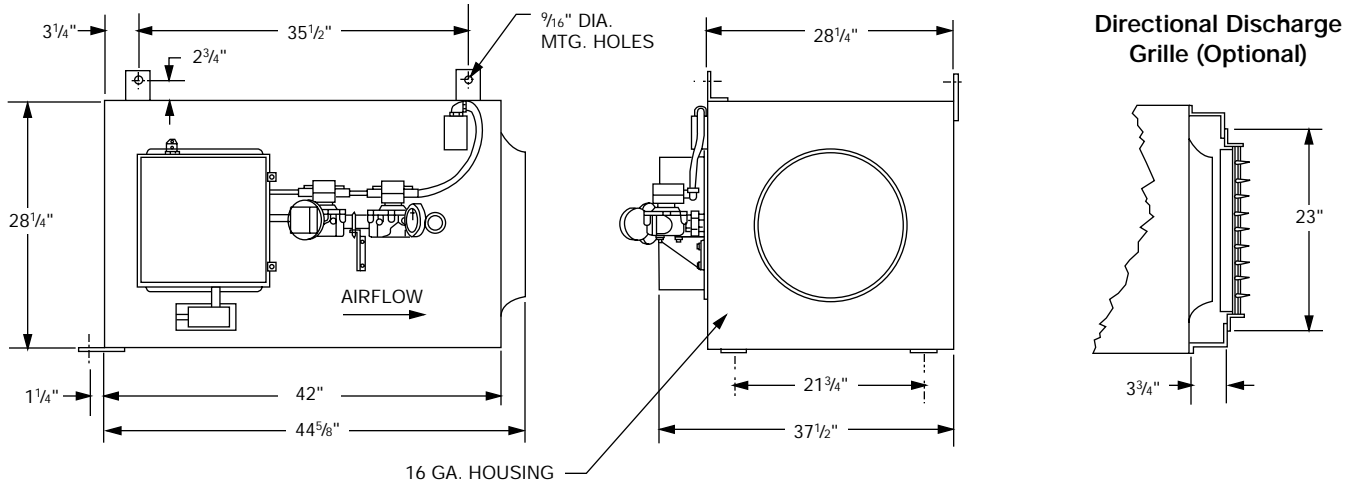
Exterior Installation

A standard roof mounted method of installation is illustrated at right. Any variation of this may be used as long as all the air is taken directly from outside.

The door air heater is very effective when mounted outside as illustrated at right. Include weathertight enclosure option. Rain shield is to be furnished by the installer.

Dimensional Data

3¼" 35½" ⁹⁄₁₆" DIA. MTG. HOLES 28¼"

Directional Discharge Grille (Optional)

2¾"

28¼"

AIRFLOW

1¼" 42" 21¾" 23"

44⅝" 37½" 3¾"

16 GA. HOUSING

Typical Specifications

Gas Door Heaters shall be as manufactured by Aerovent, Minneapolis, Minnesota, and shall be of the size and capacity as indicated in the plans and schedules. Gas Door Heaters shall be tested and rated in accordance with industry accepted test codes, and are guaranteed by the manufacturer to deliver rated performance. In addition, each unit shall be completely packaged and factory run tested prior to shipment.

PROPELLER — The propeller shall be of SC64D cast aluminum, with precision airfoil blades that are dynamically and statically balanced, and shall be attached to the shaft with a split-taper lock bushing.

HOUSING — The housing shall be 16-gauge bolted, galvanized steel construction. The unit shall be complete with stainless steel burner, lifting/mounting brackets, and a 1" x 1", 14-gauge wire mesh inlet guard.

MOTOR — Unit motor shall be NEMA Design B, heavy duty, industrial, continuous duty TEFC suitable for operation on voltage, phase, and hertz as listed in the schedule.

STANDARD EQUIPMENT — The standard unit shall include the following features:
NEMA 12 Control Enclosure with UL 508 certification, magnetic starter, control transformer, ignition transformer, and protectorelay; gas pressure regulator; flame rod; high temperature limit switch; door switch; remote operating station with switch, flame safety relay reset button, fuse, and pilot light; solenoid gas valves; airflow switch; high gas pressure switch and gas pressure gauge.

FINISH — Galvanized.

AVAILABLE OPTIONS
☐ IRI Piping Arrangement
☐ FM Piping Arrangement
☐ FM / IRI Piping Arrangement
☐ Disconnect Switch (nonfused)
☐ High-Low Fire with Thermostat
☐ High-Low Fire with Select Switch
☐ Ultraviolet Flame Sensor

☐ Motorized Inlet Damper
☐ Directional Discharge Grille
☐ Discharge Elbow
☐ Weathertight Enclosure
☐ (Horizontal/Vertical) Inlet Hood
☐ Welded Construction With Gray Enamel Finish

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