AccuSpec V4.31b
Transaction #:

JOB TITLE:

Date: 12/18/2020

Approved By:
Submittal review and approval required prior to listed unit(s) being released for production and shipment. Unit(s) configured based on information provided. The Approver is responsible for ensuring the units, options, and accessories meet the job specifications.

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SUBMITTAL SCHEDULE & DATA

Gas- and Oil-Fired Unit Heaters, Infrared Heaters, and Indoor Duct Furnaces

Job Name:
Location:
Submitted by: Amy Voltz

Date: 12/18/2020
Engineer:
Architect:
Contractor:

		Unit Tag	
Model Number	PDP350AE0185SBAN		
Quantity of Units	1		
Btu/Hr Input	350,000		
Btu/Hr Output	290,500		
CFM	4870		
Altitude	0-2000		
Temperature Rise (degrees F)	55		
External Static Pressure (E.S.P)	0.00		
Total Static Pressure (T.S.P.)	0.00		
Gas Type	Propane		
Gas Control Type	Single-Stage, Intermittent Pilot Ignition		
Supply Voltage	115/60/1		
Control Voltage	24V		
Motor HP	3/4		
Motor RPM	1125		
Blower RPM	N/A		
Heat Exchanger Type	Aluminized Steel Heat Exchanger/Burner		
Thermal Efficiency %	83.0		
Options & Accessories (See Attached Pages)			

Remarks_____
_____

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SUBMITTAL SCHEDULE & DATA

Gas- and Oil-Fired Unit Heaters and Infrared Heaters

Model	Description	Qty	Tag
PDP350AE0185SBAN	Propeller Unit Heater	1	
44340	PDP350AE0185SBAN	1	

PDP MODEL NOMENCLATURE

1,2,3	4,5,6	7	8	9,10	11,12	13	14	15	16
PDP	350	A	E	01	85	S	B	A	N

1,2,3 - Product Type
PDP – Power Vented Propeller Unit

4,5,6 - Furnace Input Rating
350 - 350,000 Btu/hr Input

7 - Heat Exchanger Type
A - Aluminized Steel Heat Exchanger and Burner

8 - Pilot Ignition
E - Intermittent Pilot Ignition

9,10 - Motor and Drive Code (Power Code)
01 - 115v/60Hz/1

11,12 - Control Code Type
85 - Single-Stage, Intermittent Pilot Ignition, Propane

13 – Fan Guard Type
S - Standard Fan Guard

14 – Development Sequence
B - Current

15 – Future
A – For Future Use

16 – Factory Installed Option
N - None

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GENERAL PERFORMANCE DATA

General Performance Data

Model	**PDP350**
At 0' Elevation	
Btu/Hr. Input	350,000
Btu/Hr. Output	290,500
Entering Airflow (CFM)	4870
Outlet Velocity	1068
Air Temp. Rise (°F)	55
Mounting Height (Max Ft.)[1]	20
Heat Throw (Max. Mtg. Ft.)[2]	70
Unit Total Power (Amps)	11.15
As Configured at 0-2000 Ft. Elevation	
Btu/Hr. Input	350,000
Btu/Hr. Output	290,500
Configured Air Temp Rise (°F)	55
Motor Data	
Horse Power	3/4
RPM	1125
Type	P.S.C.
Motor Amps	8.80
Clearances to Combustibles[3]	
Top	5"
Bottom	12"
Top of Power Exhauster	3"
Side (Access and Non-Access)	1"
Rear	6"

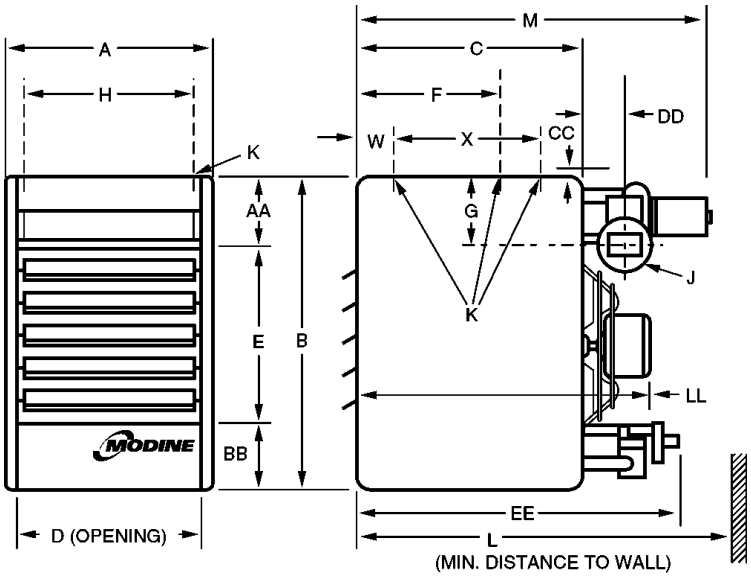
[1] At 65°F ambient and unit fired at full-rated input. Mounting height as measured from bottom of unit, and without deflector hoods.

[2] Heat Throws are calculated at 65°F ambient with a 55°F air temperature rise with the unit mounted at a maximum mounting height of 20 feet.

[3] Provide sufficient room around the heater to allow for proper combustion and operation of the fan. Free area around the heater must not be less than 1-1/2 times the discharge area of the unit.

DIMENSIONS – UNIT

Model PDP Dimensions



Model Size **PDP350**

Dimensions (inches)

A	33.625
B	40.25
C	25
D	31.1875
E	24
F	N/A
G	7.5
H	30
J (Round) [1]	6
K (Mtg Holes) [2]	3/8-16
L [3]	40.75
M	34.6875

W	5
X	16
AA	9
BB	7.25
CC	N/A
DD	3.375
EE	32.875
LL	35.5

Gas Connection [4]	3/4
Fan Diameter	22
Approx. Shipping Weight	355 lbs.

[1] For some models, this is the dimension of the vent transition outlet supplied with unit.
[2] PDP150 through PDP 300 have 2 holes and the level hanging adjustment feature. PDP 350 through PDP 400 have 4 holes.
[3] Dimension equals overall plus 6”.
[4] For natural gas; may vary depending on control availability.

Standards

All unit(s) shall include:

The gas fired unit heater(s) shall include ETL design certification for use in both the US and Canada to the ANSI Z83.8 - latest revision, standard for “Gas Unit Heater and Gas-Fired Duct Furnaces” for safe operation, construction, and performance.

Mechanical Configuration

Furnace(s) section with 82% minimum efficiency provided by an indirect-fired heat exchanger with dimpled tube pattern for efficient heat transfer.

Venting Arrangement

The venting shall be a power exhausted arrangement. The unit shall be tested to insure proper ignition when the unit is subjected to 40 mile per hour wind velocities. The unit shall also include a factory mounted differential pressure switch designed to prevent main burner ignition until positive venting has been proven.

Unit Casing

The unit heater(s) casing shall be constructed of not less than 20 gauge aluminized steel with minimization of exposed fasteners.

All exterior casing parts shall be cleaned of all oils and a phosphate coating applied prior to painting. The exterior casing parts shall then be painted with an electrostatically applied baked-on gray-green polyester powder paint (7-mil thickness) for corrosion resistance.

The unit shall be furnished with horizontal air deflectors. The deflectors are adjustable to provide for horizontal directional airflow control (up or down).

Furnace Section

The heat exchanger(s) shall be made of 20 gauge aluminized steel tubes and headers.

The thermal efficiency of the unit(s) shall be a minimum of 82% efficient for all air flow ranges.

Each heat exchanger tube shall be individually and directly flame-fired. The heat exchanger tube shall be contoured and dimpled to provide efficient heat transfer and crimped to allow for thermal expansion and contraction. The flue collector box shall be made of 20 gauge aluminized steel.

The heat exchanger(s) seams and duct connections shall be certified to withstand 0.5" W.C. external static pressure without burner flame disturbance.

The burner(s) shall be made of 28 gauge aluminized steel. Burner(s) shall have non-clogging, slotted ports with a stainless steel separator strip designed for good lighting characteristics without noise of extinction for both natural and propane gas.

The orifices shall be provided on propane gas with adjustable air shutters for controlling the primary air mixture.

The ignition controller(s) shall be 100% shut-off with continuous retry.

The gas pressure shall be 11-14" W.C. for propane gas.

The solid state ignition system shall intermittently light the pilot each time the system is energized. Once the pilot is proven, the main gas valve shall open and allow gas flow to the main burner.

The unit gas controls shall be provided with the following:

Single-stage gas controls with a single-stage combination gas control, an ignition control. The unit fires at 100% full fire based on a call for heat from a room thermostat.

An automatic reset high limit switch mounted in the air stream to shut off the gas supply in the event of overheating.

A time delay relay that delays the start of the air mover to allow the heat exchanger a warm-up period after a call for heat. The time delay relay shall also continue the air mover operation after the thermostat has been satisfied to remove any residual heat in the heat exchanger.

The unit must be field adjusted for 0-2000 feet elevation above sea level. See units installation manual for instruction for altitude adjustments.

Electrical

All electrical components shall carry UL, ETL, or CSA certification.

A low voltage terminal board shall be provided for direct wiring connection to an external thermostat.

A single 115V to 24V step down transformer shall be provided for all unit controls.

Air Mover

The motor horsepower shall be 3/4 H.P.

The motor wiring shall be in flexible metal BX conduit.

The motor shall be controlled by a time delay relay.

Propeller models shall meet the following requirements:

The motor type shall be Single-Speed, Totally Enclosed (TE).

The air mover motor shall be a 115V motor.

Mounting

The unit shall be equipped with tapped holes to accept 3/8”-16 threaded rod for suspension.

Unit to have 4 suspension points.

Accessories

The following field installed accessory control devices shall be provided with the unit: