



AccuSpec V4.6.1

SUBMITTAL SCHEDULE & DATA

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

Model	Description	Qty	Tag
PTC156AS0111SBAN	Propeller Unit Heater	2	
65907	PTC156AS0111SBAN	2	
57920	Vertical Concentric Vent Kit	2	



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PTC MODEL NOMENCLATURE

1,2,3	4,5,6	7	8	9,10	11,12	13	14	15	16
PTC	156	A	S	01	11	S	B	A	N

1,2,3 - Product Type

PTC - Separated Combustion, High Efficiency Condensing Propeller Unit

4,5,6 - Furnace Input Rating

156 - 155,000 Btu/hr Input

7 - Heat Exchanger Type

A - Aluminized Steel Heat Exchanger and Burner

8 - Pilot Ignition

S - Direct Spark Ignition

9,10 - Motor and Drive Code (Power Code)

01 - 115V motor

11,12 - Gas and Valve/Ignition Control Type (Control Code)

11 - Natural, Single Stage, Direct Spark Ignition, 100% Shut-Off with Continuous Retry

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



Intertek

General Performance Data

Model PTC 156
At 0' Elevation

Btu/Hr. Input	155,000
Btu/Hr. Output	144,150
Entering Airflow (CFM)	2600
Outlet Velocity	862
Air Temp. Rise (°F)	51
Mounting Height (Max Ft.) ¹	18
Heat Throw (Max. Mtg. Ft.) ²	62
Unit Total Power (Amps)	6.75
Condensate Produced (gal/hr)	1.1

As Configured at 0-2000 Ft. Elevation

Btu/Hr. Input	155,000
Btu/Hr. Output	144,150
Configured Air Temp Rise (°F)	51

Motor Data

Horse Power	1/3
RPM	1075
Type	P.S.C.
Motor Amps at 115V	4.60

Clearances to Combustibles

Top and Bottom	6"
Vent/Combustion Air Connector	6"
Access Side	6"
Non-Access Side	6"
Rear	18"

¹ At 65°F ambient and unit fired at full-rated input. Mounting height as measured from bottom of unit.

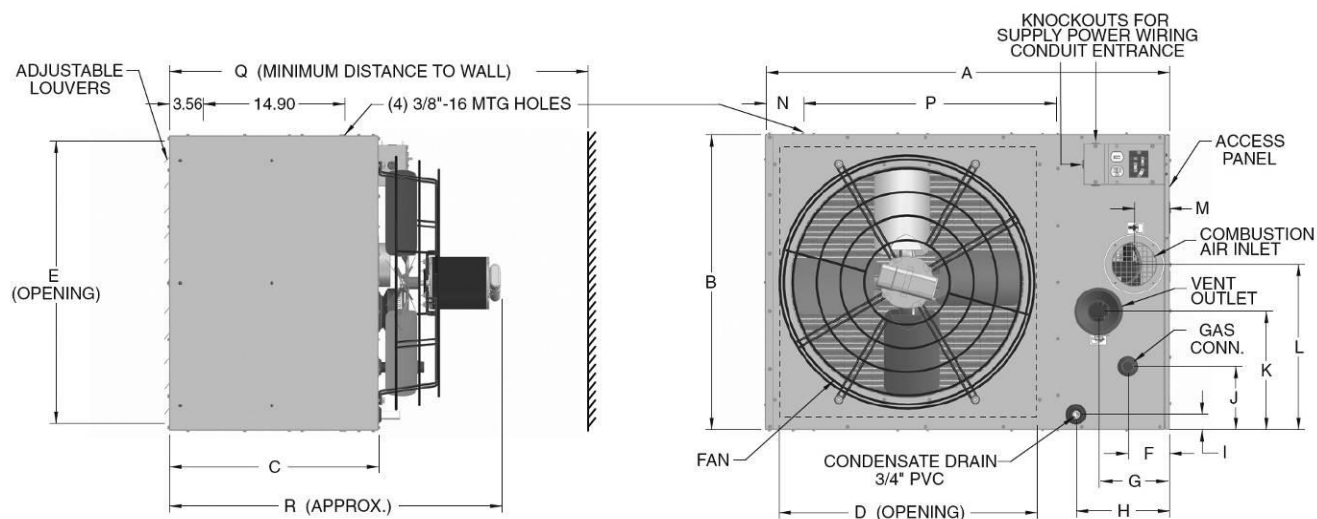
² Heat Throws are calculated at 65°F ambient with a 51°F air temperature rise with the unit mounted at a maximum mounting height of 18 feet.



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DIMENSIONS – UNIT

Model PTC Dimensions



Model Size Dimensions (inches)

A	35.53
B	23.06
C	22.05
D	22.52
E	21.18
F	4.50
G	7.98
H	10.18
I	2.15

PTC156

J	8.09
K	8.45
L	13.45
M	3.98
N	1.54
P	22.03
Q ²	45.83
R	33.83

Gas Connection	1/2
Fan Diameter	20
Vent Pipe Connection Size	4
Combustion Air Inlet Pipe Connection Size	4
Approx. Shipping Weight	165 lbs.

¹ All models have 4 holes for mounting. Listed is the hole diameter and threads per inch to accept threaded rod.

² Dimension equals overall "R" dimension plus 12".

Standards

All unit(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

Condensing furnace section with 93% minimum efficiency provided by an indirect-fired tubular heat exchanger with individually fired tubes coupled to a secondary recuperative heat exchanger for maximum heat recovery.

Venting/Combustion Air Arrangement

The unit shall be separated combustion. The venting shall be a power exhausted arrangement with a separate combustion air intake pipe connection to allow for fresh combustion air from outside the conditioned space. 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.

Venting shall be Schedule 40 PVC. For Canadian installations, all vent pipe and components must be approved to ULC S636.

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 18 gauge aluminized steel tubes and headers. Each heat exchanger tube shall be individually and directly flame-fired. The heat exchanger tube shall be crimped to allow for thermal expansion and contraction. The flue collector box shall be made of 20 gauge AL29-4C stainless steel.

The thermal efficiency of the unit(s) shall be a minimum of 93% efficient for all air flow ranges through the use of a secondary recuperative heat exchanger. The secondary heat exchanger shall be constructed of AL29-4C stainless steel to withstand the corrosive environment of condensing gas fired equipment.

The heat exchanger(s) seams and duct connections shall be certified to withstand 0.9" W.C. external static pressure without burner flame disturbance.

The burner(s) shall be in-shot type, directly firing each heat exchanger tube individually and is designed for good lighting characteristics without noise of extinction for both natural and propane gas.

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

The gas pressure shall be between 6-7" W.C for natural gas.

The solid state ignition system shall directly light the gas by means of a direct spark igniter each time the system is energized.

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.

An automatic reset high limit switch mounted on the power exhaustor housing to shut off the gas supply in the event of overheating flue gas temperatures.

A condensate drain line overflow switch that senses if the condensate line is clogged and shuts the unit heater down. The switch is factory mounted inside the unit cabinet and wired to the unit controls.

An energy-saver control utilizes stratified ceiling air to heat the space at floor level before turning on the gas controls. Its operation is independent of the room thermostat and should have a higher set-point than the room thermostat. The Stat is factory mounted outside the unit and wired into the contractor convenience box.

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 shall be orificed for 0-2000 feet elevation above sea level.

Electrical

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

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

A Contractor Convenience Package that consists of an external junction box featuring simple connection of supply power wiring internally, thermostat wiring to terminals externally, an On/Off switch, a single 115V outlet for connection of an external condensate pump, and status indicator lights to display the operational state of the unit shall be factory mounted on the rear panel of the casing.

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

Air Mover

The motor horsepower shall be 1/3 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.

Propeller Unit to have two point adjustable suspension points to allow for level hanging with a variety of accessories.

Accessories

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

A vertical concentric vent kit shall be provided to allow the vent outlet and combustion air inlet pipes to penetrate the building roof through one opening.

A condensate drain kit consisting of one threaded PVC elbow and two specially designed condensate traps to allow the unit to operate and drain properly.