REZNOR®

Sample Specifications
Model UEAS

GAS-FIRED, SEPARATED COMBUSTION UNIT HEATERS

Provide (90%+) high-efficiency, separated-combustion, power vented, condensing, gas-fired unit heaters manufactured as Reznor® brand units. The unit shall be designed for use in a building with negative pressures up to 0.15 " w.c. and for use in building where a non-explosive atmosphere exists that is dust laden and/or contains mildly corrosive fumes.

Fuel

Each of the 4 sizes in the Model UEAS series shall be equipped for use with natural gas with propane conversion kit shipped with each unit. Gas connection shall be external to the cabinet.

Heat Exchanger

The heater shall be equipped with a multi-cell, 4 pass serpentine style steel primary heat exchanger. Primary heat exchanger tubes shall be press fabricated of (titanium stabilized, corrosion resistant aluminized steel) (409 stainless steel). The heater shall also be equipped with an extruded aluminum MacroChannel secondary heat exchanger. Secondary heat exchanger shall have a PVC condensate drain connection. All heat exchangers shall be fabricated with no welding or brazing, only tool pressed mechanical joints. All heat exchanger cells shall be designed with an aerodynamic cross section to provide maximum airflow.

Burner

The units shall incorporate a single, one piece burner assembly with a single orifice. The burner shall have a continuous wound close pressed stainless steel ribbon separating the flame from the burner interior. All units shall have a single venturi tube and orifice supplying fuel to a one-piece burner housing. Each heat exchanger cell shall use balanced draft induction to maintain optimum flame control.

Controls

Controls shall include a single-stage gas valve; direct spark multi-try ignition with electronic flame supervision with timed lockout integrally controlled via a printed circuit control board. The control board shall also incorporate diagnostic lights, DIP switches for fan overrun settings, and a relay for fan only operation. All units shall be equipped with a safety limit switch.

All controls shall be enclosed in the sealed control compartment to protect them from accidental damage, dust, and atmospheric corrosion.

Combustion Air and Venting

The unit shall have a factory-installed power venter device to draw combustion air from outside of the building. The outside air shall enter the unit through a factory-installed round inlet air terminal on the rear of the heater. The control compartment shall be sealed and the access door shall be gasketed to prevent dirt, lint, dust, or other contaminants present in the heated space from entering the unit. The control compartment door shall be equipped with a safety interlock switch to prevent operation when the door is open.

The combustion air supply pipe and flue exhaust pipe shall be run in parallel from the heater to a factory supplied concentric adapter assembly, which allows for a single wall or roof penetration, to the (horizontal) (vertical) air inlet and vent terminal. A 4" PVC clean out cap drilled and tapped for attaching a vent condensate drain is included with the vent/combustion air kit.

The combustion air/venting system shall include a vibration isolated power venter motor and wheel assembly and a combustion air pressure switch.

Electrical

Operation shall be controlled by an integrated circuit board that includes LED diagnostic indicator lights. Supply voltage connections shall be made in a sealed junction box. 24-volt control connections shall be made on an externally mounted terminal strip with connections (W1, W2, R, and G). All internal wiring, both line and control voltages, shall be terminated by insulated terminal connectors to minimize shock hazard during service.

Each unit shall be equipped for use with 115/1 volt power supply.

All units will be equipped with a built-in disconnect switch.

Cabinet

The cabinet shall be low profile with a pre-coat or powdercoat RAL 1001 white paint finish. Finish shall be a minimum 80 gloss on G30 galvanized steel. The cabinet shall be constructed so that screws are not visible from the bottom, front, or sides, except for service panel and accessories. Unit construction shall incorporate a beveled front corner on control side for additional cabinet rigidity. All units shall be manufactured with a tooled drawn supply air orifice on the rear panel to reduce fan inlet noise.

The unit shall be designed for ceiling suspension featuring 3/8"-16 female threads (hanger kits for 1" pipe) at 4-point locations with no additional adapter kits.

The cabinet shall be equipped with RAL 3005 burgundy painted, roll-formed horizontal louvers. Louvers shall be spring held and adjustable for directing airflow. (Vertical louvers) (downturn nozzles) (downturn nozzles with vertical louvers) shall be available.

The cabinet shall be equipped with a full safety fan guard. The (open dripproof) (enclosed) motor and fan assembly shall be resiliently mounted to the cabinet to reduce vibration and noise.

The unit shall be designed with a full opening service access panel complete with screw closure attachment and lifting handle for removal. Service panel shall be fully gasketed and equipped with a safety interlock switch. All components in the gas train, all standard electrical controls, and the power venter shall be within the sealed service compartment.

Minimum top clearance from combustibles shall be 4". Minimum bottom clearance from combustibles shall be 1". Minimum clearance from combustibles on non-service side shall be 2".

Certifications

The unit shall be design ETL Listed for commercial/industrial installation.

Manufacturer must have a minimum of 50 years experience in the manufacture of gas fired unit heaters.

REZNOR®

Sample Specifications
Model UDAS

GAS-FIRED, SEPARATED COMBUSTION UNIT HEATERS

Provide (82%, 83%) high-efficiency, separated-combustion, power vented, gas-fired unit heaters manufactured as Reznor® brand units. The unit shall be designed for use in a building with negative pressures up to 0.15 " w.c. and for use in building where a non-explosive atmosphere exist that is dust laden and/or contains mildly corrosive fumes.

Fuel

Each of the 14 sizes in the Model UDAS series shall be equipped for use with (natural) (propane) gas. Gas connection shall be external to the cabinet.

Heat Exchanger

The heater shall be equipped with a multi-cell, 4 pass serpentine style steel heat exchanger. Heat exchanger tubes shall be press fabricated of (titanium stabilized, corrosion resistant aluminized steel) (409 stainless steel) (316 stainless steel). All heat exchangers shall be fabricated with no welding or brazing, only tool pressed mechanical joints. All heat exchanger cells shall be designed with an aerodynamic cross section to provide maximum airflow.

Burner

The units shall incorporate a single, one piece burner assembly with a single orifice. The burner shall have a continuous wound close pressed stainless steel ribbon separating the flame from the burner interior. All units shall have a single venturi tube and orifice supplying fuel to a one-piece burner housing. Each heat exchanger cell shall use balanced draft induction to maintain optimum flame control.

Controls

Controls shall include a (single-stage) (two-stage) gas valve; direct spark multi-try ignition with electronic flame supervision with timed lockout integrally controlled via a printed circuit control board. The control board shall also incorporate diagnostic lights, DIP switches for fan overrun settings, and a relay for fan only operation. All units shall be equipped with a safety limit switch.

All controls shall be enclosed in the sealed control compartment to protect them from accidental damage, dust, and atmospheric corrosion.

Combustion Air and Venting

The unit shall have a factory-installed power venter device to draw combustion air from outside of the building. The outside air shall enter the unit through a factory-installed round inlet air terminal on the rear of the heater. The control compartment shall be sealed and the access door shall be gasketed to prevent dirt, lint, dust, or other contaminants present in the heated space from entering the unit. The control compartment door shall be equipped with a safety interlock switch to prevent operation when the door is open.

The combustion air supply pipe and flue exhaust pipe shall be run in parallel from the heater to a factory supplied concentric adapter assembly, which allows for a single wall or roof penetration, to the (horizontal) (vertical) air inlet and vent terminal.

The combustion air/venting system shall include a vibration isolated power venter motor and wheel assembly and a combustion air pressure switch. Unit Sizes 30-125 shall include a flame rollout switch.

Electrical

Operation shall be controlled by an integrated circuit board that includes LED diagnostic indicator lights. Supply voltage connections shall be made in a sealed junction box. 24-volt control connections shall be made on an externally mounted terminal strip with connections (W1, W2, R, and G). All internal wiring, both line and control voltages, shall be terminated by insulated terminal connectors to minimize shock hazard during service.

Each unit shall be equipped for use with 115/1 volt power supply. (Stepdown transformers shall be available to be field installed for use with (208) (230) (460) volt power supply.)

All units will be equipped with a built-in disconnect switch.

Cabinet

The cabinet shall be low profile with a pre-coat or powdercoat RAL 1001 white paint finish. Finish shall be a minimum 80 gloss on G30 galvanized steel. The cabinet shall be constructed so that screws are not visible from the bottom, front, or sides, except for service panel and accessories. Unit construction shall incorporate a beveled front corner on control side for additional cabinet rigidity. All units shall be manufactured with a tooled drawn supply air orifice on the rear panel to reduce fan inlet noise.

The unit shall be designed for ceiling suspension featuring 3/8"-16 female threads (hanger kits for 1" pipe) at both 2-point and 4-point locations with no additional adapter kits. (Hanger kit for ceiling mounting shall be available for Sizes 30-125.)

The cabinet shall be equipped with RAL 3005 burgundy painted, roll-formed horizontal louvers. Louvers shall be spring held and adjustable for directing airflow. (Vertical louvers) (downturn nozzles) (downturn nozzles with vertical louvers) shall be available.

The cabinet shall be equipped with a full safety fan guard with no more than ½ inch grill spacing on Sizes 30-125 or no more than 1 inch on Sizes 150-400. The (open dripproof) (enclosed) motor and fan assembly shall be resiliently mounted to the cabinet to reduce vibration and noise.

The unit shall be designed with a full opening service access panel complete with screw closure attachment and lifting handle for removal. Service panel shall be fully gasketed and equipped with a safety interlock switch. All components in the gas train, all standard electrical controls, and the power venter shall be within the sealed service compartment.

Minimum top clearance from combustibles shall be 1" for Sizes 30-125 and 4" for Sizes 150-400. Minimum bottom clearance from combustibles shall be 1" for all sizes. Minimum clearance from combustibles on non-service side shall be 1" for Sizes 30-125 and 2" for Sizes 150-400.

REZNOR®

Sample Specifications
Model UDAS (cont'd)

Certifications

Unit(s) shall be design certified by the Canadian Standards Association to ANSI Z83.8b and CSA 2.6b for commercial/industrial installation.

(Model sizes 30, 45, 60, 75, 100 and 125 MBH shall be certified to CSA International Requirement 10-96 - U.S., CR96-0005 - Canada for use in attached residential garage.

Manufacturer must have a minimum of 50 years experience in the manufacture of gas fired unit heaters.

Sample Specifications
Model UDBS

GAS-FIRED, SEPARATED COMBUSTION UNIT HEATERS

Provide (82%, 83%) high-efficiency, separated-combustion, power vented, gas-fired unit heaters manufactured as Reznor® brand units. The unit shall be designed for use in a building with negative pressures up to 0.15 " w.c. and for use in building where a non-explosive atmosphere exist that is dust laden and/or contains mildly corrosive fumes.

Fuel

Each of the 14 sizes in the Model UDBS series shall be equipped for use with (natural) (propane) gas. Gas connection shall be external to the cabinet.

Heat Exchanger

The heater shall be equipped with a multi-cell, 4 pass serpentine style steel heat exchanger. Heat exchanger tubes shall be press fabricated of (titanium stabilized, corrosion resistant aluminized steel) (409 stainless steel) (316 stainless steel). All heat exchangers shall be fabricated with no welding or brazing, only tool pressed mechanical joints. All heat exchanger cells shall be designed with an aerodynamic cross section to provide maximum airflow.

Burner

The units shall incorporate a single, one piece burner assembly with a single orifice. The burner shall have a continuous wound close pressed stainless steel ribbon separating the flame from the burner interior. All units shall have a single venturi tube and orifice supplying fuel to a one-piece burner housing. Each heat exchanger cell shall use balanced draft induction to maintain optimum flame control.

Controls

Controls shall include a (single-stage) (two-stage) gas valve; direct spark multi-try ignition with electronic flame supervision with timed lockout integrally controlled via a printed circuit control board. The control board shall also incorporate diagnostic lights, DIP switches for blower overrun settings, and a relay (definite purpose 3 pole contactor) for blower only operation. All open (TEFC) blower motors shall have automatic thermal overload protection or be equipped with a factory installed motor starter with adjustable thermal overloads. All units shall be equipped with a safety limit switch.

All controls shall be enclosed in the sealed control compartment to protect them from accidental damage, dust, and atmospheric corrosion.

Combustion Air and Venting

The unit shall have a factory-installed power venter device to draw combustion air from outside of the building. The outside air shall enter the unit through a factory-installed round inlet air terminal on the rear of the heater. The control compartment shall be sealed and the access door shall be gasketed to prevent dirt, lint, dust, or other contaminants present in the heated space from entering the unit. The control compartment door shall be equipped with a safety interlock switch to prevent operation when the door is open.

The combustion air supply pipe and flue exhaust pipe shall be run in parallel from the heater to a factory supplied concentric adapter assembly, which allows for a single wall or roof penetration, to the (horizontal) (vertical) air inlet and vent terminal.

The combustion air/venting system shall include a vibration isolated power venter motor and wheel assembly and a combustion air pressure switch.

Electrical

Operation shall be controlled by an integrated circuit board that includes LED diagnostic indicator lights. Supply voltage connections shall be made in a sealed junction box. 24-volt control connections shall be made on an externally mounted terminal strip with connections W1, W2, R, and G. All internal wiring, both line and control voltages, shall be terminated by insulated terminal connectors to minimize shock hazard during service.

Units shall be equipped with a 115V power supply (Stepdown transformers shall be available to be field installed for use with a (208) (230) (460) volt power supply.)

All units will be equipped with a suitably rated, factory installed built-in disconnect switch.

Blower

Size 30,000-125,000 BTUH units shall be equipped with a centrifugal blower with direct drive from an open dripproof motor with internal overloads. Size 30,000 and 45,000 BTUH units must be able to handle .5" w.c. of external static pressure. Size 60,000-125,000 BTUH units must be able to handle .75" w.c. of external static pressure. (Size 30,000-125,000 BTUH units may be equipped with a blower inlet guard.)

Size 150,000-400,000 BTUH units shall be equipped with a centrifugal blower and adjustable belt drive and an (open dripproof) (totally enclosed) blower motor with internal overloads. Size 150,000-400,000 BTUH units must be able to handle .5" w.c. of external static pressure. (Size 150,000-400,000 BTUH units may be equipped with an OSHA-type belt guard and blower inlet guard.)

REZNOR®

Sample Specifications
Model UDBS (cont'd)

Cabinet

The cabinet shall be low profile with a pre-coat or powdercoat RAL 1001 white paint finish. Finish shall be a minimum 80 gloss on G30 galvanized steel. The heat exchanger/control compartment cabinet shall be constructed so that screws are not visible from the bottom, front, or sides, except for service panel and accessories. Cabinet shall have a beveled front corner on the control side for additional cabinet rigidity.

The unit shall be designed for ceiling suspension featuring 3/8”-16 female threads (hanger kits for 1” pipe) at 4-point locations.

The cabinet shall be equipped with RAL 3005 burgundy painted, roll-formed horizontal louvers (duct flange). Louvers shall be spring held and adjustable for directing airflow. (Vertical louvers) (downturn nozzles) (downturn nozzles with vertical louvers) shall be available.

The unit shall be designed with a full opening service access panel complete with captive screw closure attachment and lifting handle for removal. Service panel shall be fully gasketed and equipped with a safety interlock switch. All components in the gas train, all standard electrical controls, and the power venter shall be within the sealed service compartment.

Minimum **top** clearance from combustibles shall be 6” (152mm) for Size 30,000-125,000 BTUH units and 14” (356mm) for Size 150,000-400,000 BTUH units. Minimum **bottom** clearance from combustibles shall be 1” (25mm) for all size units. Minimum clearance on **access side** shall be 18” (457mm) for all sizes. Minimum clearance on **non-access side** shall be 24” (610mm) for all sizes. Minimum **rear** clearance for all sizes is 18” (457mm).

Certifications

All sizes shall be design certified by the Canadian Standards Association to ANSI Z83.8 and CSA 2.6 for commercial/industrial installation.

Manufacturer must have a minimum of 50 years experience in the manufacture of gas fired unit heaters.

Sample Specifications
Model UDAP

GAS-FIRED, POWER VENTED UNIT HEATERS

Provide (82%, 83%) high-efficiency, power vented, gas-fired unit heaters manufactured as Reznor® brand units designed for use in building areas where higher reliability is required and venting is either vertical or horizontal.

Fuel

Each of the 14 sizes in the Model UDAP series shall be equipped for use with (natural) (propane) gas. Gas connection shall be external to the cabinet.

Heat Exchanger

The heater shall be equipped with a multi-cell, 4 pass serpentine style steel heat exchanger. Heat exchanger tubes shall be press fabricated of (titanium stabilized, corrosion resistant aluminized steel) (409 stainless steel) (316 stainless steel). All heat exchangers shall be fabricated with no welding or brazing, only tool pressed mechanical joints. All heat exchanger cells shall be designed with an aerodynamic cross section to provide maximum airflow.

Burner

The units shall incorporate a single, one piece burner assembly with a single orifice. The burner shall have a continuous wound close pressed stainless steel ribbon separating the flame from the burner interior. All units shall have a single venturi tube and orifice supplying fuel to a one-piece burner housing. Each heat exchanger cell shall use balanced draft induction to maintain optimum flame control.

Controls

Controls shall include a (single-stage) (two-stage) gas valve; direct spark multi-try ignition with electronic flame supervision with timed lockout integrally controlled via a printed circuit control board. The control board shall also incorporate diagnostic lights, DIP switches for fan overrun settings, and a relay for fan only operation. All units shall be equipped with a safety limit switch.

All controls shall be enclosed in the unit housing to protect them from accidental damage that could be caused by factors in the building that would adversely affect external controls.

Combustion Air and Venting

The unit shall have a factory-installed power venter device to draw combustion air through an inlet in the rear of the cabinet.

The combustion air/venting system shall include a vibration isolated power venter motor and wheel assembly and a combustion air pressure switch. Unit Sizes 30-125 shall include a flame rollout switch. (The unit shall be equipped with an approved common vent option to allow venting with another gravity vented Category I gas appliance).

(A vent cap shall be available.)

REZNOR®

Sample Specifications
Model UDAP (cont'd)

Electrical

Operation shall be controlled by an integrated circuit board that includes LED diagnostic indicator lights. Supply voltage connections are made at the circuit board. 24-volt control connections shall be made on an externally mounted terminal strip with connections (W1, W2, R, and G). All internal wiring, both line and control voltages, shall be terminated by insulated terminal connectors to minimize shock hazard during service.

Each unit shall be equipped for use with 115/1 volt power supply. (Stepdown transformers shall be available to be field installed for use with (208) (230) (460) volt power supply.)

Cabinet

The cabinet shall be low profile with a pre-coat or powdercoat RAL 1001 white paint finish. Finish shall be a minimum 80 gloss on G30 galvanized steel. The cabinet shall be constructed so that screws are not visible from the bottom, front, or sides, except for service panel and accessories. Unit construction shall incorporate a beveled front corner on control side for additional cabinet rigidity. All units shall be manufactured with a tooled drawn supply air orifice on the rear panel to reduce fan inlet noise.

The unit shall be designed for ceiling suspension featuring 3/8”-16 female threads (hanger kits for 1” pipe) at both 2-point and 4-point locations with no additional adapter kits. (Hanger kit for ceiling mounting shall be available for Sizes 30-125.)

The cabinet shall be equipped with RAL 3005 burgundy painted, roll-formed horizontal louvers. Louvers shall be spring held and adjustable for directing airflow. (Vertical louvers) (downturn nozzles) (downturn nozzles with vertical louvers) shall be available.

The cabinet shall be equipped with a full safety fan guard with no more than ½ inch grill spacing on Sizes 30-125 or no more than 1 inch on Sizes 150-400. The (open dripproof) (enclosed) motor and fan assembly shall be resiliently mounted to the cabinet to reduce vibration and noise.

The unit shall be designed with a full opening service access panel complete with screw closure attachment and lifting handle for removal. All components in the gas train, all standard electrical controls, and the power venter shall be within the service compartment.

Minimum top clearance from combustibles shall be 1” for Sizes 30-125 and 4” for Sizes 150-400. Minimum bottom clearance from combustibles shall be 1” for all sizes. Minimum clearance from combustibles on non-service side shall be 1” for Sizes 30-125 and 2” for Sizes 150-400.

Certifications

Unit(s) shall be design certified by the Canadian Standards Association to ANSI Z83.8b and CSA 2.6b for commercial/industrial installation.

(Model sizes 30, 45, 60, 75, 100 and 125 MBH shall be certified to CSA International Requirement 10-96 - U.S., CR96-0005 - Canada for use in attached residential garage.

Manufacturer must have a minimum of 50 years experience in the manufacture of gas fired unit heaters.

Sample Specifications
Model UDBP

GAS-FIRED, POWER VENTED UNIT HEATERS

Provide (82%, 83%) high-efficiency, power vented, gas-fired unit heaters manufactured as Reznor® brand units designed for use in building areas where higher reliability is required and venting is either vertical or horizontal.

Fuel

Each of the 14 sizes in the Model UDBP series shall be equipped for use with (natural) (propane) gas. Gas connection shall be external to the cabinet.

Heat Exchanger

The heater shall be equipped with a multi-cell, 4 pass serpentine style steel heat exchanger. Heat exchanger tubes shall be press fabricated of (titanium stabilized, corrosion resistant aluminized steel) (409 stainless steel) (316 stainless steel). All heat exchangers shall be fabricated with no welding or brazing, only tool pressed mechanical joints. All heat exchanger cells shall be designed with an aerodynamic cross section to provide maximum airflow.

Burner

The units shall incorporate a single, one piece burner assembly with a single orifice. The burner shall have a continuous wound close pressed stainless steel ribbon separating the flame from the burner interior. All units shall have a single venturi tube and orifice supplying fuel to a one-piece burner housing. Each heat exchanger cell shall use balanced draft induction to maintain optimum flame control.

Controls

Controls shall include a (single-stage) (two-stage) gas valve; direct spark multi-try ignition with electronic flame supervision with timed lockout integrally controlled via a printed circuit control board. The control board shall also incorporate diagnostic lights, DIP switches for blower overrun settings, and a relay (definite purpose 3 pole contactor) for blower only operation. All open (TEFC) blower motors shall have automatic thermal overload protection or be equipped with a factory installed motor starter with adjustable thermal overloads. All units shall be equipped with a safety limit switch.

All controls shall be enclosed in the sealed control compartment to protect them from accidental damage, dust, and atmospheric corrosion.

REZNOR®

Sample Specifications
Model UDBP (cont'd)

Combustion Air and Venting

The unit shall have a factory-installed power venter device to draw combustion air through an inlet in the rear of the cabinet.

The combustion air/venting system shall include a vibration isolated power venter motor and wheel assembly and a combustion air pressure switch.

(An approved vent cap shall be available.)

Electrical

Operation shall be controlled by an integrated circuit board that includes LED diagnostic indicator lights. Supply voltage connections are made at the circuit board. 24-volt control connections shall be made on an externally mounted terminal strip with connections W1, W2, R, and G. All internal wiring, both line and control voltages, shall be terminated by insulated terminal connectors to minimize shock hazard during service.

Units shall be equipped with a 115V power supply (Stepdown transformers shall be available to be field installed for use with a (208) (230) (460) volt power supply.)

Blower

Size 30,000-125,000 BTUH units shall be equipped with a centrifugal blower with direct drive from an open dripproof motor with internal overloads. Size 30,000 and 45,000 BTUH units must be able to handle .5" w.c. of external static pressure. Size 60,000-125,000 BTUH units must be able to handle .75" w.c. of external static pressure. (Size 30,000-125,000 BTUH units may be equipped with a blower inlet guard.)

Size 150,000-400,000 BTUH units shall be equipped with a centrifugal blower and adjustable belt drive and an (open dripproof) (totally enclosed) blower motor with internal overloads. Size 150,000-400,000 BTUH units must be able to overcome .5" w.c. of external static pressure. (Size 150,000-400,000 BTUH units may be equipped with an OSHA-type belt guard and blower inlet guard.)

Cabinet

The cabinet shall be low profile with a pre-coat or powdercoat RAL 1001 white paint finish. Finish shall be a minimum 80 gloss on G30 galvanized steel. The heat exchanger/control compartment cabinet shall be constructed so that screws are not visible from the bottom, front, or sides, except for service panel and accessories. Cabinet shall have a beveled front corner on the control side for additional cabinet rigidity.

The unit shall be designed for ceiling suspension featuring 3/8"-16 female threads (hanger kits for 1" pipe) at 4-point locations.

The cabinet shall be equipped with RAL 3005 burgundy painted, roll-formed horizontal louvers (duct flange). Louvers shall be spring held and adjustable for directing airflow. (Vertical louvers) (downturn nozzles) (downturn nozzles with vertical louvers) shall be available.

The unit shall be designed with a full opening service access panel complete with captive screw closure attachment and lifting handle for removal. All components in the gas train, all standard electrical controls, and the power venter shall be within the service compartment.

Minimum **top** clearance from combustibles shall be 6" (152mm) for Size 30,000-125,000 BTUH units and 14" (356mm) for Size 150,000-400,000 BTUH units. Minimum **bottom** clearance from combustibles shall be 1" (25mm) for all size units. Minimum clearance on **access side** shall be 18" (457mm) for all sizes. Minimum clearance on **non-access side** shall be 24" (610mm) for all sizes. Minimum **rear** clearance for all sizes is 18" (457mm).

Certifications

All sizes shall be design certified by the Canadian Standards Association to ANSI Z83.8 and CSA 2.6 for commercial/industrial installation.

Manufacturer must have a minimum of 50 years experience in the manufacture of gas fired unit heaters.

Sample Specifications
Model F

GAS-FIRED, POWER VENTED UNIT HEATERS

Provide gravity-vented, high-efficiency, gas-fired unit heaters manufactured as Reznor® brand units. Units are designed to take combustion air from the indoor space and vent to the outdoors.

Model F - Gas-fired, propeller fan, gravity-vented model

Fuel

Each Model F series unit shall be equipped for use with (natural) (propane) gas and (120/1/60) (208/1/60) (230/1/60) (220-240/1/50) volt power supply.

Heat Exchanger

The heat exchanger shall be aluminized (E-3 stainless) (409 stainless) steel. Die-formed burners shall be of aluminized steel and include flared ports and a stainless steel insert. The units shall be designed to provide 80% thermal efficiency.

Controls

Controls include a 24-volt control transformer; single-stage (two-stage) gas control system; an intermittent spark pilot with electronic flame supervision (intermittent spark pilot with electronic flame subversion and timed lockout); fan and limit safety controls; an open, drip-proof (totally enclosed) fan motor with internal overloads; and a blocked vent switch system.

Cabinet

The cabinet is equipped with a full safety fan guard and horizontal (vertical) louvers (downturn nozzles) for directing airflow. The unit is arranged for ceiling suspension with 2-point (4-point) threaded hanger connections (hanger kits).

Certifications

Model F unit heaters are design certified to ANSI and CAN/CGA Standards by the Canadian Standards Association for installation in the United States and Canada.

REZNOR®

Sample Specifications

Model B

GAS-FIRED, POWER VENTED UNIT HEATERS

Provide gravity-vented, high-efficiency, gas-fired unit heaters manufactured as Reznor® brand units. Units are designed to take combustion air from the indoor space and vent to the outdoors.

Model B - Gas-fired, blower, gravity-vented model

Fuel

Each Model B series unit shall be equipped for use with (natural) (propane) gas and (120/1) (230/1) (460/3) (575/3) volt power supply.

Heat Exchanger

The heat exchanger shall be aluminized (E-3 stainless) (409 stainless) steel. Die-formed burners shall be of aluminized steel and include flared ports and a stainless steel insert. The units shall be designed to provide 80% thermal efficiency.

Controls

Controls include a 24-volt control transformer; single-stage (two-stage) gas control system; an intermittent spark pilot with electronic flame supervision (intermittent spark pilot with electronic flame supervision and timed lockout); fan and limit safety controls; a centrifugal blower with (direct) (adjustable belt) drive; and an (open, drip-proof) (totally enclosed) blower motor with internal overloads.

Blower

Each unit must be able to overcome .25" w.c. (.5" w.c.) of external static pressure (and may be equipped with an OSHA-type belt and/or blower inlet guard).

Cabinet

The cabinet is equipped with horizontal (vertical) louvers (downturn nozzles) for directing airflow or with a duct flange. The unit is arranged for ceiling suspension with 4-point threaded hanger connections (hanger kits).

Certifications

Model B unit heaters are design certified to ANSI and CAN/CGA Standards by the Canadian Standards Association for installation in the United States and Canada.

Sample Specifications

Model OH

OIL-FIRED, POWER VENTED UNIT HEATERS

Provide oil-fired unit heaters manufactured as Reznor® brand units. The units shall be completely packaged and arranged for ceiling suspension with four-point threaded suspension sockets. They shall be equipped for use with #2 oil using a pressure-atomizing gun-type power burner, a single-stage fuel pump, and an electric spark ignition with an automatic cad-cell flame safety system with manual reset.

Heat Exchanger

Heaters are to be equipped with a heavy, 13 gauge combustion chamber and low stress 18 gauge steel heat exchanger. All sizes shall include flame observation port, CO_2 sample port, and service and cleanout access panels.

Controls

Each unit is to be equipped with a combination fan and limit switch with manual fan switch for safety and comfort control. The units are to be used with 115 volt supply and have a 24-volt control transformer.

Blower

Model OH heaters are provided with a propeller fan and a totally enclosed fan motor with internal overloads. Each unit is to be equipped with a burner service tray, an OSHA-type fan guard, and horizontal (vertical) air directional louvers.

Certifications

Model OH unit heaters are design certified by Underwriters Laboratories (UL) or certified by the Canadian Standards Association (CSA).

Sample Specifications

Model LDAP

INDIRECT-FIRED, DOWNFLOW HEATERS

Provide packaged indoor heating units as Reznor® brand equipment. The units shall be Model LDAP (400, 800, 1200) arranged for ceiling suspension with vertical (down) air discharge. Each unit must have a single point wall or roof penetration for exhaust of flue gases. Units shall be rated for 83% thermal efficiency.

Cabinet

The cabinet shall be in one piece. Painted and ready to be suspended from ceiling by four suspension points (or wall mounted), designed for ease of installation with an external 24-volt terminal strip and gas line connection.

Discharge Air Options

Air supply will be directed by means of (2-way down discharge louvers) (4-way down discharge louvers) (30° bend multi-positional discharge nozzles with 2-way louvers) (60° bend multi-positional discharge nozzles with 2-way discharge louvers) (30° bend multi-positional discharge nozzles with 4-way down discharge louvers).

Fan and Air Controls

The units shall include a propeller fan for each heat section with 3-speed 208/230 Volt open fan motor(s) with internal overload protection, pressure switch to verify venter flow, resiliently isolated venter motor, resiliently isolated axial fan and motor assembly, a high temperature limit control, a destratification fan control, and a built-in disconnect switch. Operation shall be controlled through an integrated circuit board. The circuit board monitors heater operation and has LED diagnostic indicator lights to identify abnormalities in control functions. Unit shall have a single-stage (2-stage on size 400) gas valve field adjustable for up to 10,000 ft/3,045 M elevation (high altitude pressure switch kit for units installed above 6,000 ft/1,830 M).

Fuel

Units shall be equipped for use with (natural gas) (propane), (208/1) (230/1) supply voltage, multi-try direct ignition with timed lockout.

Heat Exchanger

Each heat section shall have the Reznor TCORE2® heat exchanger and single burner combustion system. The heat exchanger shall be of (aluminized steel) (409 stainless steel). The furnace shall be equipped with all required safety elements.

Options

The following shall be available (manual shutoff valve) (1" pipe coupling hanger kit) (24 volt thermostat) (multiple heater control) (thermostat guard) (vent cap).

Certifications

Heaters shall be certified by the ETL Testing Agency for commercial and industrial applications.