



REZNOR

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LCSA - LCSBD - LCSC

Gas Fired Unit Heaters
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LCSA complete with horizontal and optional vertical louvres

LCSA - LCSBD - LCSC

Gas Fired Unit Heaters

The new LCSA builds on the technical excellence of the previous range to provide cost effective and robust heating for industrial and commercial buildings.

Using wall or roof mountings, the heaters are available for either room sealed or conventional power flue applications.

Model Range

- > LCSA axial fan
- > LCSBD bi-directional axial fans
- > LCSC centrifugal fan

These gas fired units are available with eleven heat outputs for use on natural gas (G20) as standard, but alternatively can be specified for use on propane (G31).

LCSA heaters are fitted with axial fans and discharge warm air through a front outlet fitted with both horizontal and vertical louvers. Units can be turned through 90° and blow vertically downwards when using the rear mounted suspension points.

LCSBD heaters discharge warm air in two opposing directions potentially enhancing distribution whilst reducing capital and installation costs for certain applications.

LCSC heaters are fitted with direct drive centrifugal fans and discharge warm air via a duct spigot on the outlet (optional louvers are available for free-blowing applications).

For applications requiring a ducted connection on the inlet, an optional blower cabinet for the LCSC is available, which can also be fitted with filters with filters and/or mixing dampers if required.

Specification

Cabinet

Formed from sheet steel and painted ivory white to give a robust and durable finish. Louvres painted burgundy red.

Heat Exchanger

Tubular four-pass serpentine arrangement manufactured as standard from aluminised steel with stainless steel option.

Burner

In-shot burner type with automatic spark ignition and full safety flame proving. On/Off control is supplied as standard with High/Low and modulating control optional.

Power Venter Flue Fan

These unit heaters are fitted with a powerful venter fan that enables exhaust & combustion air to be run up to a maximum of 9m each.



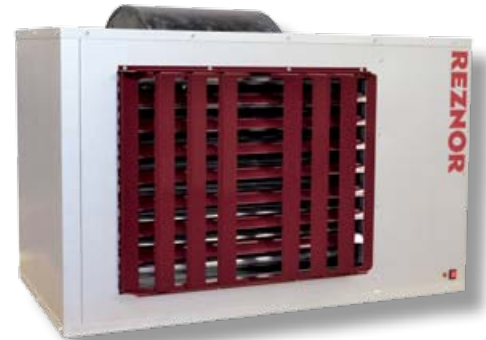
Options

- > Top flue outlet (LCSA)
- > Stainless steel heat exchanger
- > High/low or modulating burner
- > 30° or 60° downflow heads
- > Wall brackets (LCSA)
- > Destratification thermostat
- > Blower cabinet
- > Filters (LCSC)
- > Mixing dampers with either two position or modulating damper motor (LCSC)

LCSBD with bi-directional axial fans



LCSC complete with horizontal and optional vertical louvres for free blowing application



LCSC complete with mixing box and duct spigot outlet for ducted application



Electric Motors

All electric motors are ErP compliant where necessary.

Efficiency

Each heater has been designed and developed with fuel efficiency in mind with efficiencies exceeding the mandatory requirements of building regulations.

Fuel

Heaters are supplied for use with natural gas (G20) as standard, however propane (G31) is available upon request.

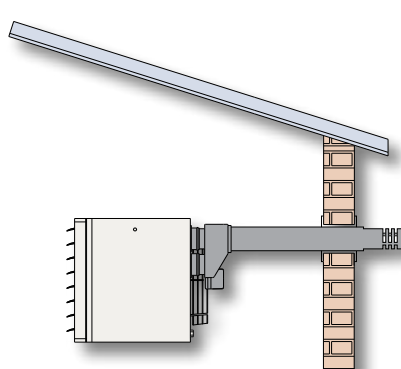
Sealed Combustion Circuit

The heaters are factory fitted with a power flue venter that enables the heater to be operated in either room sealed or fan assisted flue mode. The flue fan is safety interlocked with the burner control system via a pressure differential sensor.

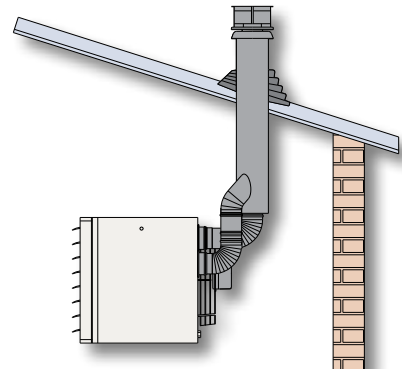
A single phase electrical supply is required to each unit except the LCSC60 which is three phase. This supply should not be switched off except for maintenance

Versatile Flue Installation

The balanced flue terminal provides both the combustion air inlet and flue outlet from a single building penetration. The terminals are ordered separately from the heaters to suit either a wall outlet or roof outlet. Additional flue and combustion air pipes may be added, up to a maximum of nine metres of flue pipe, plus nine metres of combustion air pipe. (This reduces by 1.5 metres for every 90° bend fitted).



Balanced flue wall outlet (type C12) eliminates expensive roof opening and flashing



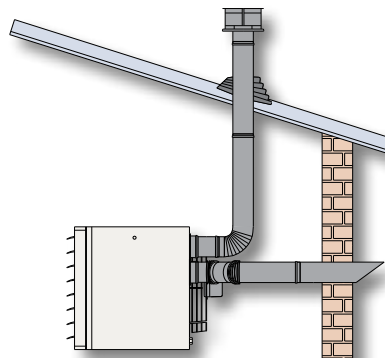
Balanced flue roof outlet (type C32)

Installation

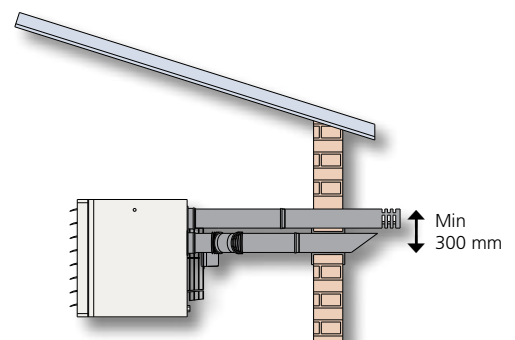
Units may be suspended or alternatively mounted on a suitable non-combustible support. Integral suspension points complete with an M10 female thread are provided to each heater.

A single phase electrical supply is required to each unit except the LCSC60 which is three phase. This supply should not be switched off except for maintenance.

Units must not be installed in atmospheres containing flammable or explosive vapours, combustible dust, halogenated hydrocarbons or chlorinated vapours. They are also unsuitable for areas where contaminants may affect electrical motors or connections.



Combustion air through wall, flue outlet through the roof (C52)



Separate combustion air and flue pipes (type C12) for applications where wall thickness exceeds maximum length shown in flue dimension table

Heater positions and flue arrangements illustrate LCSA models and are indicative only. For heater and flue clearances please refer to the appliance installation and maintenance instructions.



Optimised Control

To complement these units heaters, a versatile range of SmartCom control panels are available

- > Self adapting optimum start and stop
- > Simple user friendly programming
- > Individual seven day programming
- > Day, night and frost (5°C) temperature settings
- > Three on/off periods per day

- > Easy set overtime and holiday periods
- > Remote burner reset facility
- > Password protection to prevent unauthorised adjustment
- > Hours run and service data logging
- > Battery back up in the event of mains failure
- > High / low or modulating burner control (SmartCom MZ required)



Optional SmartCom MZ panel allows up to 16 panels to be linked for centralised control

| LCSBD Technical Data | | | | |
|-----------------------------|-------------------|--------------------|-------|-------|
| | | 95 | 120 | 145 |
| Nominal heat output | kW | 94.5 | 119.3 | 144.0 |
| Airflow | m ³ /h | 8700 | 11088 | 13408 |
| Temperature rise | K | 34 | 32 | 35 |
| Throw | m | 31.0 | 38.0 | 39.0 |
| Gas Consumption | | | | |
| Natural gas G20 | m ³ /h | 10.95 | 13.80 | 15.77 |
| Propane G31 | kg/h | 8.24 | 10.17 | 11.62 |
| Gas connection | Rc | ¾" | ¾" | ¾" |
| Electrical Supply | V/ph/hz | 230/240V 1N ~ 50Hz | | |
| Mounting height(s) | m | 5.0 | 6.0 | 6.0 |
| Flue diameter nom | mmø | 130 | 130 | 130 |
| Combustion air diameter nom | mmø | 130 | 130 | 130 |
| Maximum horizontal run | m | 9 | 9 | 9 |
| Maximum vertical run | m | 9 | 9 | 9 |
| Noise level ⁽¹⁾ | dB(A) | | | |
| Net weight | kg | | | |

Sound pressure level in dB(A), measured at 5 metres from the unit with A=160m² and Q=2

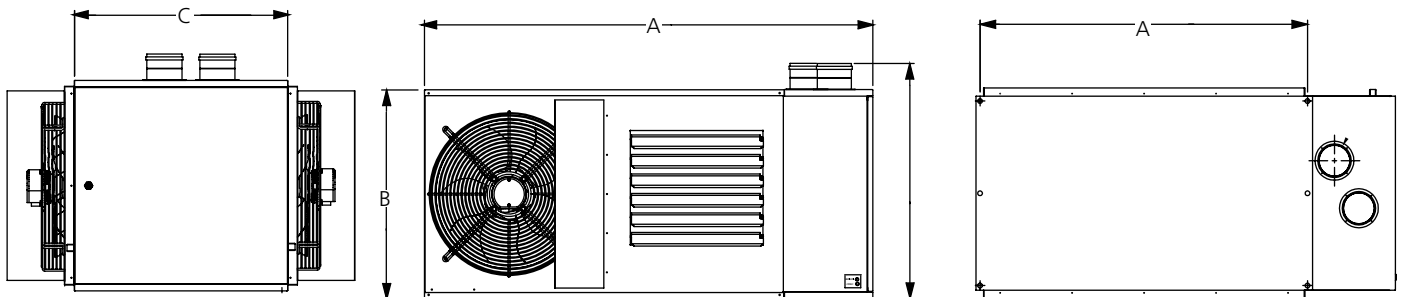
Throw is based upon a terminal velocity of 0.5m/s and is dependent upon mounting height, room temperature & louvre settings.

Gas consumption & outputs based upon natural gas G20 having a calorific value of 10.5kWh/m³ GCV & Propane G31 14.0kWh/kg GCV

Minimum gas inlet pressure is 17.5mbar for natural gas & 37mbar for Propane. Maximum inlet pressure is 50mbar.

Gas connection size is not supply line size.

LCSBD



| LCSBD Dimensions | | | | |
|-------------------------------|-------------------------|------------|------|------|
| | | 95 | 120 | 145 |
| Unit Width | A | 1750 | 1750 | 1750 |
| Unit Height | B | 800 | 980 | 1150 |
| Unit Depth | C | 810 | 810 | 810 |
| Overall Depth | J | 1321 | 1321 | 1321 |
| Suspension Points | | M10 Female | | |
| Suspension Centres | T U V | | | |
| Flue & combustion air spigots | dia P Q R S | 130 | 130 | 130 |
| Gas Connection | M N | | | |
| Clearances (minimum) | | | | |
| Top | | | | |
| Rear of Fan | | | | |
| Bottom | | | | |
| Non Access Side | | | | |
| Access Side | | | | |

LCSC Technical Data

| | | 20 | 30 | 45 | 60 | 75 | 100 |
|--------------------------|-------------------|--------------------|------|------|-----------------------|--------------------|-------|
| Nominal Heat Output | kW | 22 | 26 | 45 | 61 | 73 | 95 |
| Airflow @ min static | M ³ /h | 2500 | 4200 | 5400 | 5600 | 7100 | 8100 |
| Airflow @ max static | M ³ /h | 2250 | 2700 | 4000 | 5600 | 7100 | 8100 |
| Min static pressure | Pa | 50 | 50 | 50 | 100 | 150 | 100 |
| Max static pressure | Pa | 200 | 300 | 200 | 200 | 350 | 300 |
| Gas Consumption | | | | | | | |
| Natural Gas G20 | M ³ /h | 2.52 | 3.02 | 5.19 | 6.98 | 8.38 | 11.19 |
| Propane G31 | kg/h | 1.86 | 2.22 | 3.82 | 5.15 | 6.17 | 8.24 |
| Gas Connection | Rc | 1/2" | 1/2" | 3/4" | 3/4" | 3/4" | 3/4" |
| Electrical Supply | V/ph/Hz | 230/240V 1N ~ 50Hz | | | 400/415V 3P ~ 50Hz | 230/240V 1N ~ 50Hz | |
| Blower Electrical Rating | W | 300 | 600 | 1000 | 550 | 1800 | 1800 |
| Total Electrical Rating | W | 453 | 753 | 1153 | 703 | 1953 | 1953 |
| Maximum Flue Run | m | 9 | 9 | 9 | 9 | 9 | 9 |
| Noise level | dB(A) | | | | | | |
| Net Weight | kg | 54 | 56 | 87 | 99 | 109 | 155 |

Min & max static pressure refers to external static pressure of ductwork (by others)

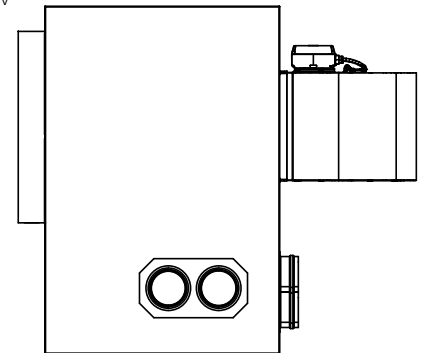
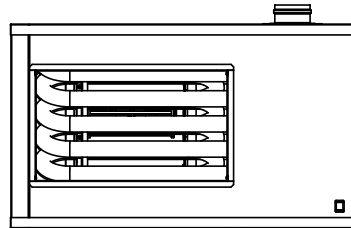
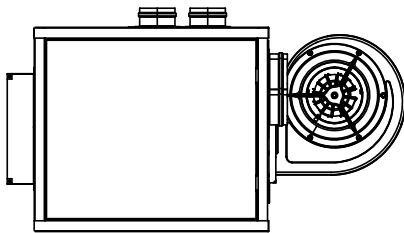
Airflows & max static pressure quoted, exclude the use of optional filters and/or mixing dampers

Gas consumption & outputs based upon natural gas G20 having a calorific value of 10.5kWh/m³ GCV & Propane G31 14.0kWh/kg GCV

Minimum gas inlet pressure is 17.5mbar for natural gas & 37mbar for Propane. Maximum inlet pressure is 50mbar.

Gas connection size is not supply line size.

LCSC



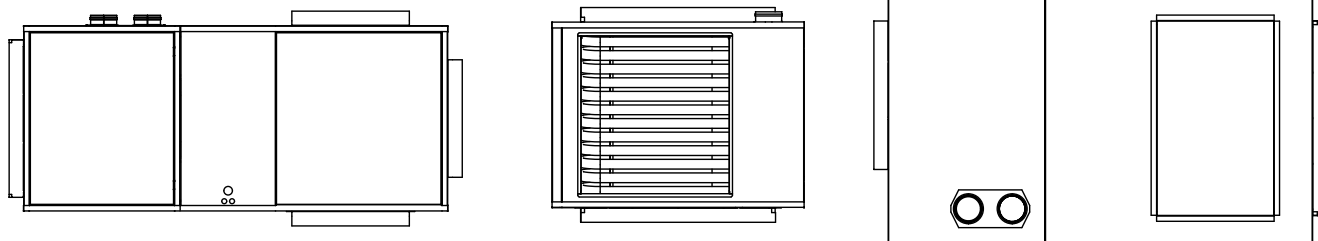
LCSC Dimensions

| | | Model | | | | | |
|-------------------------------|-----|------------|------|------|------|------|------|
| | | 20 | 30 | 45 | 60 | 75 | 100 |
| Unit Width | A | 965 | 965 | 965 | 1298 | 1298 | 1298 |
| Unit Height | B | 567 | 567 | 845 | 845 | 845 | 954 |
| Unit Depth | C | 652 | 652 | 652 | 652 | 652 | 807 |
| Overall Depth | J | 1105 | 1105 | 1215 | 1215 | 1300 | 1455 |
| Suspension Points | | M10 Female | | | | | |
| Suspension Centres | T | 123 | 123 | 123 | 123 | 123 | 123 |
| | U | 611 | 611 | 611 | 942 | 942 | 942 |
| | V | 406 | 406 | 406 | 406 | 406 | 550 |
| Flue & combustion air spigots | dia | 100 | 100 | 130 | 130 | 130 | 130 |
| | P | 345 | 345 | 508 | 508 | 508 | 608 |
| | Q | 444 | 444 | 720 | 720 | 720 | 833 |
| | R | 122 | 122 | 134 | 135 | 135 | 212 |
| | S | 221 | 221 | 211 | 212 | 212 | 212 |
| Duct Outlet Spigot | E | 70 | 73 | 73 | 150 | 150 | 150 |
| | F | 533 | 533 | 533 | 761 | 761 | 761 |
| | G | 129 | 93 | 116 | 153 | 116 | 72 |
| | H | 307 | 372 | 607 | 515 | 607 | 810 |
| Gas Connection | M | 87 | 87 | 82 | 82 | 82 | 82 |
| | N | 106 | 106 | 175 | 175 | 175 | 180 |
| Clearances (minimum) | | | | | | | |
| Top | | 150 | | | | | |
| Rear of Fan | | 250 | | | | | |
| Bottom | | 150 | | | | | |
| Non Access Side | | 150 | | | | | |
| Access Side | | 800 | | | | | |

| LCSC with Cabinet Technical Data | | | | | | | |
|----------------------------------|-------------------|--------------------|------|------|-----------------------|--------------------|-------|
| | | 20 | 30 | 45 | 60 | 75 | 100 |
| Nominal Heat Output | kW | 22 | 26 | 45 | 61 | 73 | 95 |
| Airflow @ min static | M ³ /h | 3100 | 3900 | 6200 | 6500 | 9600 | 10500 |
| Airflow @ max static | M ³ /h | 2100 | 2300 | 5200 | 5700 | 7500 | 8500 |
| Max static pressure | Pa | 250 | 300 | 150 | 150 | 250 | 200 |
| Gas Consumption | | | | | | | |
| Natural Gas G20 | M ³ /h | 2.52 | 3.02 | 5.19 | 6.98 | 8.38 | 11.19 |
| Propane G31 | kg/h | 1.86 | 2.22 | 3.82 | 5.15 | 6.17 | 8.24 |
| Gas Connection | Rc | 1/2" | 1/2" | 3/4" | 3/4" | 3/4" | 3/4" |
| Electrical Supply | V/ph/Hz | 230/240V 1N ~ 50Hz | | | 400/415V 3P ~ 50Hz | 230/240V 1N ~ 50Hz | |
| Blower Electrical Rating | W | 300 | 600 | 1000 | 550 | 1800 | 1800 |
| Total Electrical Rating | W | 453 | 753 | 1153 | 703 | 1953 | 1953 |
| Maximum Flue Run | m | 9 | 9 | 9 | 9 | 9 | 9 |
| Noise level | dB(A) | | | | | | |
| Net Weight | kg | 59 | 59 | 64 | 94 | 99 | 114 |

Min & max static pressure refers to external static pressure of ductwork (by others)
 Airflows & max static pressure quoted, exclude the use of optional filters and/or mixing dampers
 Gas consumption & outputs based upon natural gas G20 having a calorific value of 10.5kWh/m³ GCV & Propane G31 14.0kWh/kg GCV
 Minimum gas inlet pressure is 17.5mbar for natural gas & 37mbar for Propane. Maximum inlet pressure is 50mbar.
 Gas connection size is not supply line size.

LCSC with Cabinet



| LCSC with Cabinet Dimensions | | | | | | | |
|-------------------------------|-----|------------|------|------|------|------|------|
| | | Model | | | | | |
| | | 20 | 30 | 45 | 60 | 75 | 100 |
| Unit Width | A | 965 | 965 | 965 | 1298 | 1298 | 1298 |
| Unit Height | B | 567 | 567 | 845 | 845 | 845 | 954 |
| Unit Depth | C | 1677 | 1677 | 1842 | 2027 | 2027 | 2182 |
| Suspension Points | | M10 Female | | | | | |
| Suspension Centres | T | | | | | | |
| | U | 611 | 611 | 611 | 942 | 942 | 942 |
| | V | 406 | 406 | 406 | 406 | 406 | 550 |
| | W | | | | | | |
| Flue & combustion air spigots | dia | 80 | 100 | 100 | 130 | 130 | 130 |
| | P | | | | | | |
| | Q | | | | | | |
| | R | | | | | | |
| Duct Outlet Spigot | E | 70 | 73 | 73 | 150 | 150 | 150 |
| | F | 533 | 533 | 533 | 761 | 761 | 761 |
| | G | 129 | 93 | 116 | 153 | 116 | 72 |
| | H | 307 | 372 | 607 | 515 | 607 | 810 |
| Gas Connection | M | | | | | | |
| | N | | | | | | |
| Clearances (minimum) | | | | | 150 | | |
| Top | | | | | 250 | | |
| Rear of Fan | | | | | 150 | | |
| Bottom | | | | | 150 | | |
| Non Access Side | | | | | 150 | | |
| Access Side | | | | | 800 | | |