

Duurzame verwarmings-  
oplossingen

info@hewasolutions.nl  
085-0608876  
Kryptonstraat 39B 04  
7463 PB Rijssen  
www.hewasolutions.nl



## Specification & Product overview

### Wood Burning Hot Air Space Heaters



**SPACE HEATERS. THE LOW COST SOLUTION FOR HEATING INDUSTRIAL UNITS,  
WORKSHOPS OR FACTORIES WITH WOOD.**



# Free fuel

**Up to 399kW of energy instantly delivered directly to where it is needed**

**Workshop and factory heating with wood and clean secondary wood waste**

Heating for workshops, industrial units or warehouses.

If you have a large industrial area to heat and are looking for a far cheaper solution to fossil fuels, then a Zero Ridge Space Heater could be the right choice for you. If you have access to dry, seasoned wood then a space heater is without doubt a cost effective and efficient way of heating your premises.

Our Zero Ridge Space Heater is a purpose built, large scale industrial heater, built to last and to deliver lots of heat quickly into large industrial units or workshops.



Channel heat to where its needed



Fits anywhere

For over 40 years have been refining and developing the idea to produce a simple and efficient industrial space heater. The current range of Zero Ridge Space Heaters are the culmination of many years of evolution.

Zero Ridge space heaters are powerful, simple to

operate, yet

highly efficient. They are solely designed to heat large areas quickly, using whatever dry wood, such as pallets or off cuts are available, whilst offering low maintenance and longevity.

- ✓ Low purchasing cost
- ✓ Low installation cost
- ✓ Low running costs
- ✓ Low maintenance costs
- ✓ CO<sup>2</sup> friendly
- ✓ Highly efficient
- ✓ Simple to use
- ✓ Long life







## Features

1. Ventilation air is drawn into the base of the space heater.
2. Grate is suspended above the base so ash can be removed from below.
3. Easy removable access plate for flueway cleaning.
4. Upper loading door insulated with reinforced refractory brick.
5. Lower access door with safety plate to prevent system over firing.
6. Electrical control panel, including ventilation air temperature read out.
7. Directional hot air distribution ports.

## Which size model for you?

| Model | surface m <sup>2</sup> floor area | volume m <sup>3</sup> |
|-------|-----------------------------------|-----------------------|
| F28   | 100 / 150 m <sup>2</sup>          | 500 m <sup>3</sup>    |
| F 55  | 200 / 250 m <sup>2</sup>          | 1,000 m <sup>3</sup>  |
| F 85  | 300 / 350 m <sup>2</sup>          | 1,500 m <sup>3</sup>  |
| F 120 | 500 / 600 m <sup>2</sup>          | 3,000 m <sup>3</sup>  |
| F 240 | 1,000 m <sup>2</sup>              | 5,000 m <sup>3</sup>  |
| F 350 | 1,800 m <sup>2</sup>              | 8,000 m <sup>3</sup>  |

\* Before the use of manufactured and preserved wood you should contact your local environmental department to confirm its suitability.



# Hot air

**Instant hot air is circulated directly into your room**

**More than just a heater - it heats in winter and ventilates in the summer**

Fill with any dry, seasoned wood and minutes later you have masses of hot air blasting into your workspace.

Simplicity and efficiency is what is required when heating large areas. Everything about the heaters is robust and made to last. The whole range is very easy to use, with no time being lost with complicated manuals or training courses.

Once you have mastered the art of lighting a fire it takes only minutes to start. Equally the safety aspect has not been overlooked. Thermostats ensure that no energy is wasted.

## The details

The Zero Ridge range of wood burning workshop heaters have heat outputs from 29 to 399 kW.

The range is suitable for burning all types of dry seasoned wood and clean secondary waste wood, but not manufactured wood such as treated wood or ply and MDF.

The fuel chambers are constructed of high grade stainless steel for long life, no fire bricks to change. The fuel is loaded through an upper separate large fuelling door while the ash is removed through a lower access door.

Each model is fitted with a large capacity ventilation fan which passes air over the workshop heater's heat exchanger which is specially designed to be as efficient as possible. This results in lower fuel consumption and higher heat outputs. The ventilation fan is automatically activated by the on board controls when heat is produced. At the end of the burning cycle the fan automatically switches off.

Models fitted with the external flue fan will ensure correct chimney operation whatever the weather conditions.

## Summer ventilation

An override switch is included so during warmer weather the unit workshop heater can be used as a cooling ventilation system.



Range of sizes



Front loading



Space heating



Ideal for industry



## Do I need a flue fan?

The three smaller models F28, F55 and F85 can be supplied for use with natural draught. The F55 and F85 have the option of a flue fan. Whilst certainly not essential, Zero Ridge do

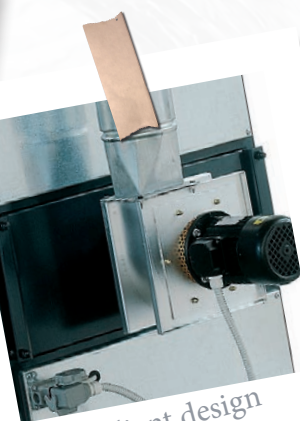
recommend that you have a flue fan to reduce any potential problem with flue draught and to make installation and operation straight forward.

By not having a flue fan you will need to ensure that you have enough flue height to draw the emissions from the chamber and expel them outside any down draught zone.

This is no different to any other similar device or stove. By installing a fan flue you eliminate any potential flue problems, installation becomes easier and your heater will be far more efficient.

## Maintenance

Simple cleaning and maintenance ensure reduced input. General maintenance is the removal of ash when required and once or twice a year a general clean and chimney sweep.

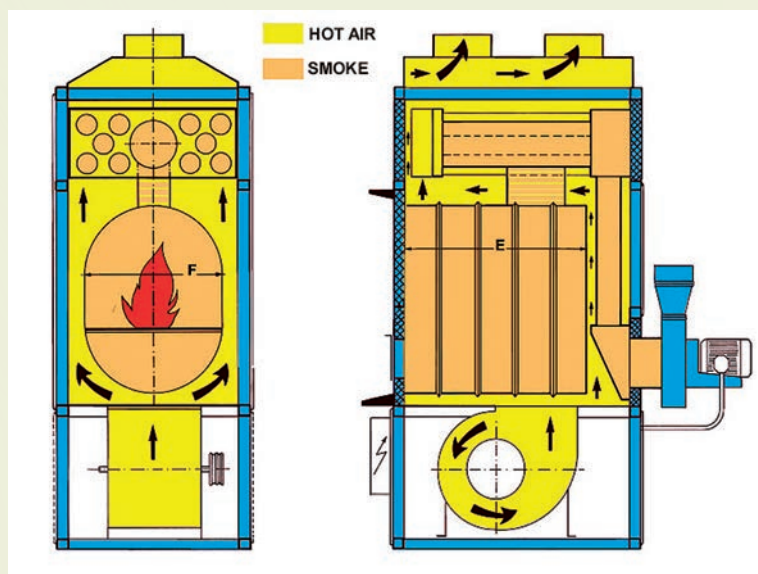


Brilliant design



Small footprint

labour



## How it works

Room air is drawn into the space heater from a lower panel and is circulated around the combustion chamber, where it is heated before being vented into the room via the ducts on the top. The combustion gasses never mix with the clean heated air as the two chambers are completely separate.

## Heating remote areas

Additional ventilation ducts can be added. However due to the large built in ventilation fan hot air will be circulated over very large areas.

## Guarantee

Zero Ridge guarantee the range for 12 months. We offer full industry leading pre and after sales technical support.



# Easy fit

## Where can you install a wood heater?

You can install and run these units almost anywhere. They are designed to heat large areas by funneling clean hot air directly into the surrounding area. Exhaust gasses need to be vented through the wall or roof to the outside.

## Heating requirements

Your should be sited with the recommended minimum clearances.

We recommend that your is installed centrally within the building. This removes the requirement for further ducting, which will allow the to heat the largest of premises effortlessly and efficiently as shown below.



The Fabbri air distribution systems ensures even the largest of areas are circulated with warm air



Natural Energy



Roof support



Wall support



Starter Kit



Funnels

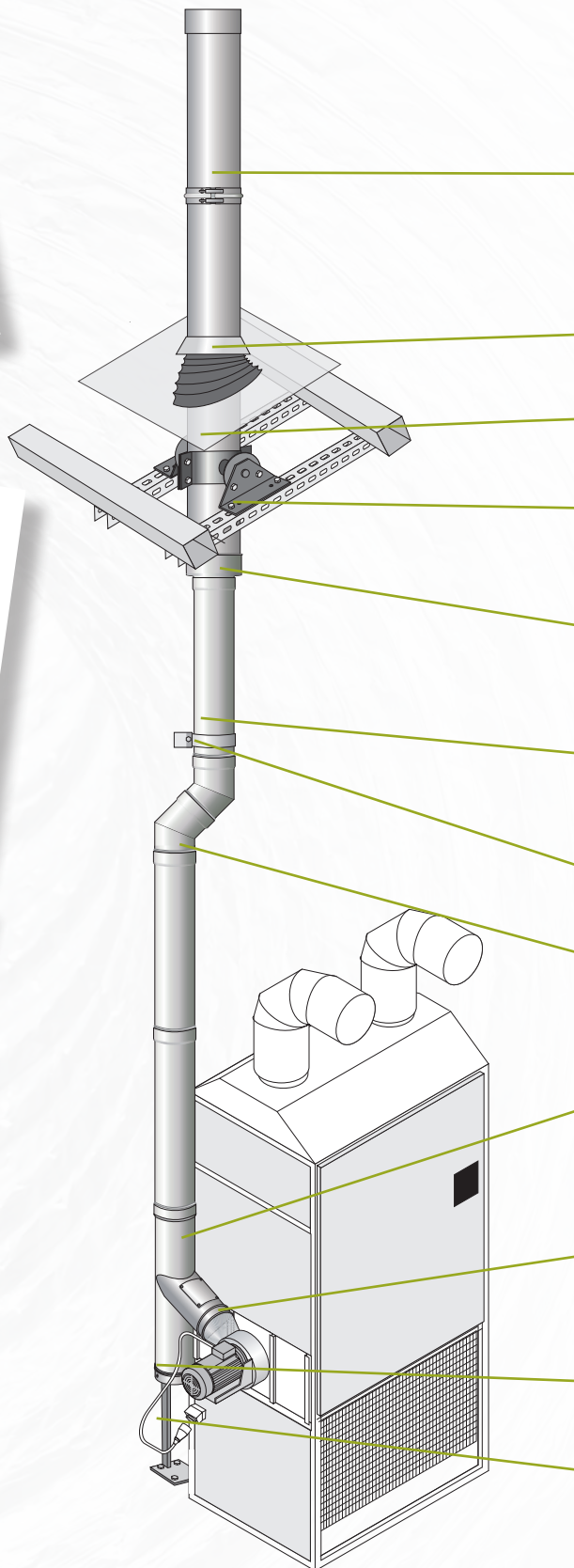


Working Fabbri



heater

## Typical Installation for with flue fan



### Insulated flue

All chimney sections passing through a roof or exposed outside a building must be twin wall installed chimney suitable for wood burning applications.

### Storm collar

Fits above flashing to prevent water leakage through flashing.

### Roof flashing

Prevents water ingress around the chimney as it exits the roof.

### Roof support

To support the chimney as it exits through the roof to create a stable platform.

### Twin wall to single wall adaptor

This adaptor allows the connection between twin wall chimney and single wall flue pipe.

### Single wall flue pipe

This can be used within a building if the distance from the flue to combustible materials is at least three times the diameter of the flue pipe.

### Wall support

To support and prevent movement of the flue system.

### Bends within the flue system

Up to two bends can be used in a flue system to assist when having to pass obstacles in the flue route. These bends should not exceed 45 degrees.

### Connection (Flue starter kit)

Connection to the flue fan should be made with a 135 degree bend or a 90 degree bend with debris trap. Connection must not be vertical. This will help prevent rain and debris entering the fan assembly.

### Connecting collar\*

To enable cleaning from the rear, the flue connecting collar must be removable.

### Debris trap\*

The connection assembly must include a debris/cleaning access.

### Support stand\*

The weight of the chimney should be supported from the floor and not on the fan flue connection.

\* Part of the Starter kit (see page 8) can be supplied by Zero Ridge.



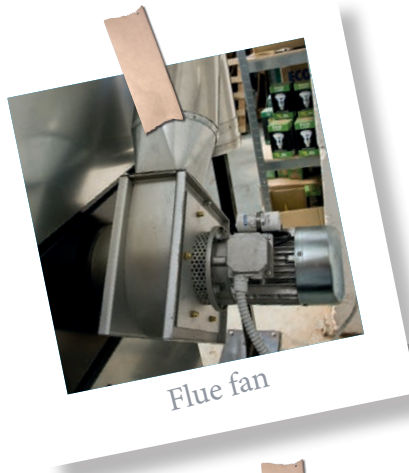
# Flue starter

## Flue support stands

The flue starter kits offer a quick and simple means of connecting a space heater to a flue. The debris trap helps prevent rain and debris entering the fan assembly. The flue support stands ensures the weight of the chimney system is supported by the floor and not on the flue fan connection.



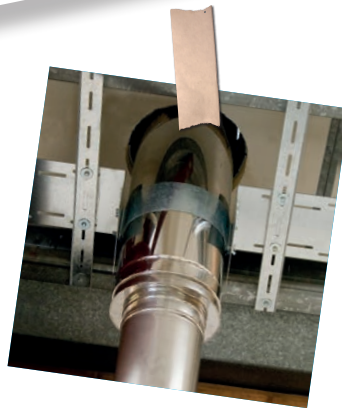
**Flue stand support**



**Flue fan**



**Burn waste wood**



**Roof support**



**Ash Vac  
Cleans up ash**



**F85 Keeping  
warehouse HQ1**



# kits



Burn waste wood



Burn seasoned wood



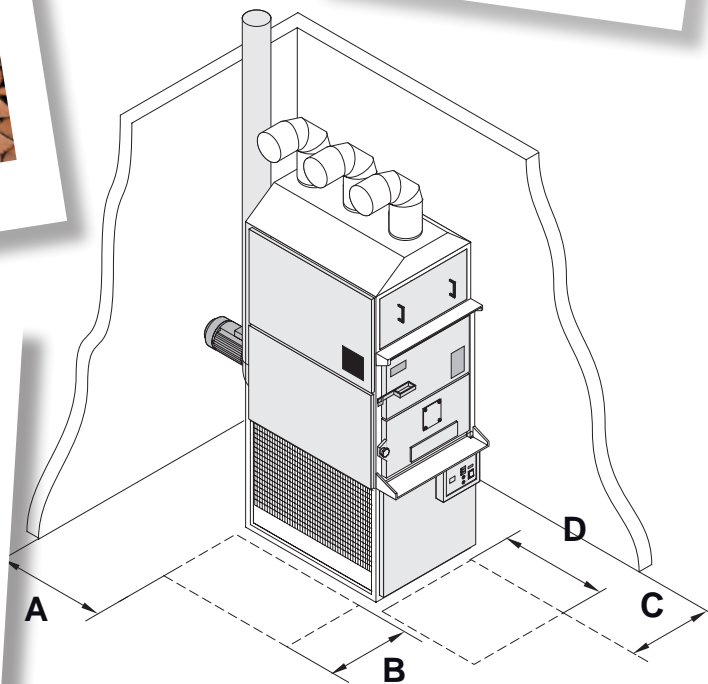
Burn wood chip



Burn logs



Burn clean, cut up pallets



## Minimum clearances (mm)

| Model | A    | B   | C   | D    |
|-------|------|-----|-----|------|
| F28   | 1000 | 600 | 600 | 1500 |
| F55   | 1000 | 600 | 600 | 1500 |
| F85   | 1000 | 600 | 600 | 1500 |
| F120  | 1200 | 600 | 600 | 1800 |
| F240  | 1200 | 600 | 600 | 1800 |
| F350  | 1200 | 600 | 600 | 2000 |

## Can I burn any type of wood?

No. You can only burn dry or seasoned wood. You must not use painted, treated wood, sawdust or wood containing foreign objects or glue, which includes ply and MDF. Burning these items may cause damage to your and the environment. However you can use any other type of dry or seasoned wood, such as off cuts, broken pallets, waste wood, split logs, pellets, briquettes as well as small quantities of paper and cardboard mixed with wood.

# Space Heaters

## Space Heaters price & technical overview



| F28  | Order Code |
|--|------------|
| F28 Biomass Space Heater 29kW<br>Without flue fan. Single phase 230v | F28        |

| Technical Information           |                         |                                  |         |
|---------------------------------|-------------------------|----------------------------------|---------|
| Unit width                      | 550 mm                  | Fuel chamber width               | 500 mm  |
| Unit height                     | 1400 mm                 | Fuel chamber height              | 400 mm  |
| Unit depth                      | 920 mm                  | Ventilation fan power            | 0.26 kW |
| Flue diameter                   | 160 mm                  | Ventilation exit static pressure | 160pa   |
| Air delivery pipes              | 2 x 180 mm Ø            |                                  |         |
| Air flow (at 15 °C)             | 2200 m <sup>3</sup> /hr |                                  |         |
| Electricity supply              | Single phase            |                                  |         |
| Fuel consumption @ 20% moisture | 13Kg per hour           |                                  |         |



| F55   | Order Code       |       |
|---|------------------|-------|
| F55 Biomass Space Heater 64kW<br>Without flue fan. Single phase 230v. | Without flue fan | F55SV |
| F55 Biomass Space Heater 64kW<br>With flue fan. Single phase 230v.    | With flue fan    | F55CV |

| Technical Information           |                         |                                  |         |
|---------------------------------|-------------------------|----------------------------------|---------|
| Unit width                      | 700mm                   | Fuel chamber depth               | 660 mm  |
| Unit height                     | 1550 mm                 | Fuel chamber width               | 480 mm  |
| Unit depth                      | 1150 mm                 | Fuel chamber height              | 600 mm  |
| Flue diameter                   | 180 mm                  | Ventilation fan power            | 0.26 kW |
| Air delivery pipes              | 2 x 200 mm Ø            | Flue fan power (CV only)         | 0.26 kW |
| Air flow (at 15 °C)             | 3500 m <sup>3</sup> /hr | Ventilation exit static pressure | 160pa   |
| Electricity supply              | Single phase            |                                  |         |
| Fuel consumption @ 20% moisture | 20Kg per hour           |                                  |         |



| F85  | Order Code       |       |
|--|------------------|-------|
| F85 Biomass Space Heater 93kW<br>Without flue fan. Three phase 400v. | Without flue fan | F85SV |
| F85 Biomass Space Heater 93kW<br>With flue fan. Three phase 400v.    | With flue fan    | F85CV |

| Technical Information           |                                    |                                  |         |
|---------------------------------|------------------------------------|----------------------------------|---------|
| Unit width                      | 800 mm                             | Fuel chamber depth               | 750 mm  |
| Unit height                     | 1760 mm                            | Fuel chamber width               | 560 mm  |
| Unit depth                      | 1280 mm                            | Fuel chamber height              | 700 mm  |
| Flue diameter                   | 180 mm                             | Ventilation fan power            | 1.12 kW |
| Air delivery pipes              | 2 x 250 mm Ø                       | Flue fan power (CV only)         | 0.26 kW |
| Air flow (at 15 °C)             | 6300 m <sup>3</sup> /hr            | Ventilation exit static pressure | 160pa   |
| Electricity supply              | 8.5 amps supply 1.9 amps per phase |                                  |         |
| Fuel consumption @ 20% moisture | 30Kg per hour                      |                                  |         |

Please Note:

An accurate heat load appraisal must be undertaken to ensure a suitable match between the appliance and your heating requirements.



# Air Heaters

## Air Heaters price & technical overview



| F120  | Order Code |
|---|------------|
| F120 Biomass Space Heater 140kW<br>With flue fan. Three Phase 400v. | F120       |

| Technical Information           |                                |                                  |         |
|---------------------------------|--------------------------------|----------------------------------|---------|
| Unit width                      | 930 mm                         | Fuel chamber depth               | 950 mm  |
| Unit height                     | 1970 mm                        | Fuel chamber width               | 600 mm  |
| Unit depth                      | 1700 mm                        | Fuel chamber height              | 860 mm  |
| Flue diameter                   | 200 mm                         | Ventilation fan power            | 2.24 kW |
| Air delivery pipes              | 3 x 250 mm Ø                   | Flue fan power                   | 0.56 kW |
| Air flow (at 15 °C)             | 8900 m³/hr                     | Ventilation exit static pressure | 160pa   |
| Electricity supply              | 10amps supply 4 amps per phase |                                  |         |
| Fuel consumption @ 20% moisture | 43Kg per hour                  |                                  |         |



| F240  | Order Code |
|---|------------|
| F240 Biomass Space Heater 279kW<br>With flue fan. Three phase 400v. | F240       |

| Technical Information           |                                |                                  |         |
|---------------------------------|--------------------------------|----------------------------------|---------|
| Unit width                      | 1100 mm                        | Fuel chamber depth               | 1200 mm |
| Unit height                     | 2250 mm                        | Fuel chamber width               | 740 mm  |
| Unit depth                      | 1900 mm                        | Fuel chamber height              | 1040 mm |
| Flue diameter                   | 200 mm                         | Ventilation fan power            | 2.98 kW |
| Air delivery pipes              | 3 x 300 mm Ø                   | Flue fan power                   | 0.56 kW |
| Air flow (at 15 °C)             | 17800 m³/hr                    | Ventilation exit static pressure | 160pa   |
| Electricity supply              | 10amps supply 5 amps per phase |                                  |         |
| Fuel consumption @ 20% moisture | 83Kg per hour                  |                                  |         |



| F350  | Order Code |
|---|------------|
| F350 Biomass Space Heater 399kW<br>With flue fan. Three phase 400v. | F350       |

| Technical Information           |                                |                                  |         |
|---------------------------------|--------------------------------|----------------------------------|---------|
| Unit width                      | 1220 mm                        | Fuel chamber depth               | 1900 mm |
| Unit height                     | 2700 mm                        | Fuel chamber width               | 900 mm  |
| Unit depth                      | 2700 mm                        | Fuel chamber height              | 900 mm  |
| Flue diameter                   | 250 mm                         | Ventilation fan power            | 4.47 kW |
| Air delivery pipes              | 4 x 350 mm Ø                   | Flue fan power                   | 1.12 kW |
| Air flow (at 15 °C)             | 26000 m³/hr                    | Ventilation exit static pressure | 160pa   |
| Electricity supply              | 15amps supply 8 amps per phase |                                  |         |
| Fuel consumption @ 20% moisture | 125Kg per hour                 |                                  |         |

### Notes:

The stated heat outputs are approximate and should be taken as a guide.

Variables such as fuel, chimney draught, insulation and operation are all governing factors in determining the heat capacity of any biomass space heater. Installation must conform to local building and national regulations.

All appliances must be installed by competent persons and within the required draught range. Precautions must be taken to avoid high and low draughts.

Zero Ridge operate a programme of continuous development and reserve the right to modify its products without prior notice.



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