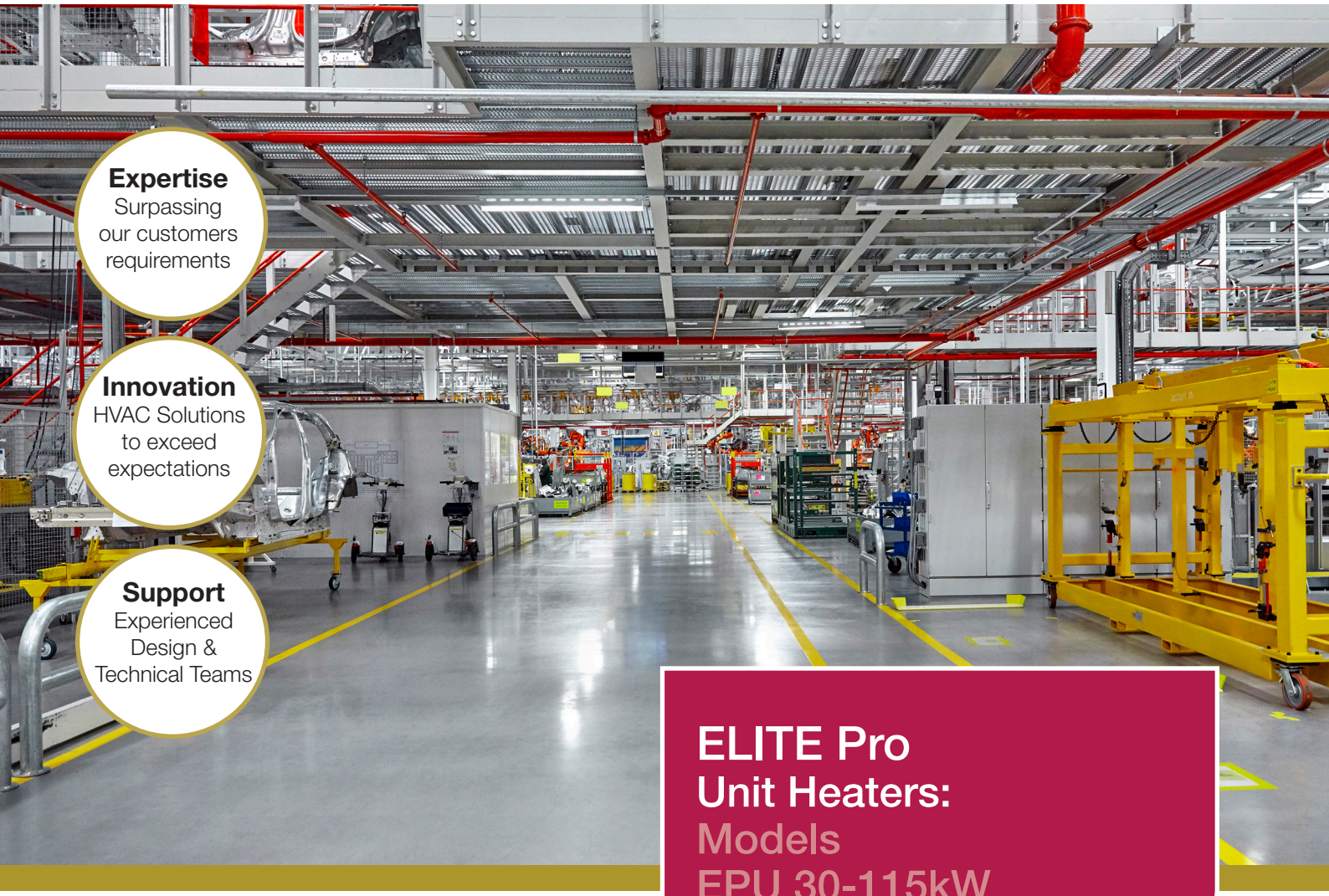
Combat
Heating Solutions Ltd




# ELITE Pro Unit Heaters:
## Models EPU 30-115kW


Features :

- For room sealed or open flued installations.
- Heater status indicator lamps
- Stainless steel heat exchanger as standard
- Suspended or shelf mounted installation
- Remote fan operation for summer air circulation facility

## Committed to meeting the needs and expectations of our customers, we are dedicated to providing energy-efficient products, services and support


Welcome to Combat Heating Solutions, the leading provider of high-quality, energy-efficient heating solutions for commercial and industrial applications. With over 60 years of experience in the industry, we are committed to delivering reliable and innovative heating solutions that meet the needs of our customers.

At Combat Heating Solutions, we understand that every business has unique heating requirements, which is why we offer a wide range of heating products to suit various applications. Whether you need a heating solution for a large industrial facility of a small retail space, we have the expertise and experience to deliver a solution that fits your needs and budget.

Our heating solutions are designed with energy efficiency in mind, helping you to save money on your energy bills while reducing your carbon footprint. We use only the highest quality materials and components to ensure that our heating products are durable, reliable, and long-lasting. At Combat Heating Solutions, we pride ourselves on our exceptional customer service, from the initial consultation and design to installation and ongoing support.

Our team of experienced professionals is dedicated to ensuring that your heating system meets your expectations and provides reliable, efficient heating for years to come.

Thank you for considering Combat Heating Solutions for your commercial or industrial heating needs. We look forward to working with you to deliver a heating solution that meets your requirements and exceeds your expectations.

The Elite Pro line of ErP Compliant suspended unit heaters represents Combat's latest and most efficient range yet. With its innovative air stream system and exceptionally low NOx emissions, this range offers optimal energy efficiency for both industrial and commercial heating needs.

The Elite Pro range offers hassle-free installation, maintenance, and operation, making it a top choice for commercial and industrial settings. These units will provide flexibility for a range of air handling options, providing versatility to meet your specific needs.
The Elite Pro range offers a comprehensive solution for all your heating needs.

ERP LOT 21 COMPLIANT

MADE IN THE UK

# Elite Pro
# Unit Heaters

At Combat, we pride ourselves on our unwavering commitment to designing, developing, and delivering cutting-edge products and system solutions that are both energy-efficient and highly effective. That's why we've given our Elite unit heaters a fresh, new look and expanded the range to include several sizes.

Our newly revamped Elite Pro range of warm air unit heaters is designed to offer even greater energy efficiency and smoother operation. These heaters are incredibly easy to install, maintain, and operate, and come with a variety of options to choose from. They can be installed in either room-sealed or open-flued configurations and feature lockout indicator lights that make troubleshooting a breeze.

The Elite Pro range comes packed with a host of features, including fully modulating burners, for superior energy efficiency and stainless-steel heat exchangers that ensure long-lasting performance. Moreover, these heaters can be either suspended or shelf-mounted, freeing up valuable workspace and providing flexibility with several air handling options, such as axial, centrifugal fan, or ducted applications.

## Product Features

- Room sealed or open flued installations
- Lockout indicator lights for easy fault diagnosis
- Ultra quiet operation
- Ease of Installation
- All new construction
- Easy access to components
- New innovative modulating burner design.
- Reduced components
- Stainless Steel Heater exchanger as standard.
- Reduced NOx levels.
- Suspended or shelf mounted
- Remote fan operation for summer air circulation


**Ease of installation**

**Service**

**Technical Support**

# Elite Pro
# Unit Heaters

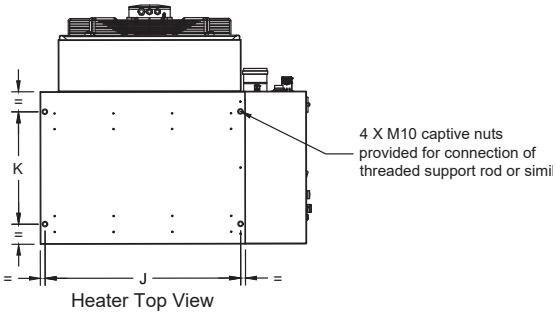
| General Technical Information | | EPUA30 | EPUA40 | EPUA50 | EPUA60 | EPUA75 | EPUA90 | EPUA100 | EPUA115 |
|---|---|---|---|---|---|---|---|---|---|
| Maximum heat input - Gross CV | kW | 36.75 | 48.6 | 58.3 | 71.3 | 85.7 | 107.7 | 119 | 134 |
| Maximum heat input - Net CV | kW | 33.10 | 43.78 | 48.01 | 64.23 | 77.20 | 97.02 | 107.20 | 120.72 |
| Maximum heat output | kW | 30 | 40 | 50 | 60 | 75 | 90 | 100 | 114 |
| Minimum heat input - Gross CV | kW | 13.75 | 13.75 | 23.3 | 23.3 | 38 | 38 | 41 | 41 |
| Minimum Heat output | kW | 11.8 | 11.8 | 20 | 20 | 34 | 34 | 34 | 34 |
| Gas connection | ELUA B,C,D | ½BSP | ½BSP | ½BSP | ½BSP | ¾BSP | ¾BSP | ¾BSP | ¾BSP |
| Gas consumption rates | m³/h | 3.5 | 4.6 | 5.6 | 6.8 | 8.2 | 10.3 | 11.3 | 12.8 |
| **EPUA with Axial Fan** | | | | | | | | | |
| Total electrical load | W | 547 | 547 | 596 | 596 | 960 | 960 | 1060 | 1060 |
| Air flow | m³/h | 5200 | 5200 | 8200 | 8200 | 12000 | 12000 | 15000 | 15000 |
| Sound pressure level at 5m | dB(A)<br>dB | [59.4]<br>58.7 | 59.4]<br>58.7 | [62.5]<br>61.5 | [62.5]<br>61.5 | [66]<br>64.8 | [66]<br>64.8 | [68.2]<br>66.6 | [68.2]<br>66.6 |
| **EPUB with centrifugal fan and EPUC with centrifugal fan and duct inlet** | | | | | | | | | |
| Total electrical load | W | 1695 | 1695 | 3167 | 3167 | 3518 | 3518 | 5444 | 5444 |
| Normal speed | | MID | MID | MID | MID | MID | MID | High | High |
| Airflow | m³/h | 5800 | 5800 | 8500 | 8500 | 13000 | 13000 | 15300 | 15300 |
| **EPUD duct heater no fan** | | | | | | | | | |
| Minimum air flow required | m³/h | 5200 | 5200 | 8200 | 8200 | 12000 | 12000 | 15000 | 15000 |
| Pressure loss across heat exchanger | | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| **Flue and air intake** | | | | | | | | | |
| Flue and air intake size | mm Ø | 80 | 80 | 80 | 80 | 100 | 100 | 130 | 130 |
| Maximum straight flue/air intake | m | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| **CO2 levels** | | | | | | | | | |
| $CO_2$ at maximum rate | | 8.8 | 9.0 | 8.8 | 9.0 | 8.2 | 8.0 | 8.8 | 9.0 |
| $CO_2$ at minimum rate | | 8.0 | 8.0 | 8.0 | 8.0 | 9.2 | 9.2 | 8.0 | 8.0 |
| **G20 Gas rates** | | | | | | | | | |
| Max m³/h | | 3.5 | 4.6 | 5.6 | 6.8 | 8.2 | 10.3 | 11.3 | 12.8 |
| Min m³/h | | 1.3 | 1.3 | 2.2 | 2.2 | 3.6 | 3.6 | 3.9 | 3.9 |
| **G31 Gas rates** | | | | | | | | | |
| Max Kg³hr | | 2.6 | 3.5 | 4.2 | 5.1 | 6.1 | 7.7 | 8.5 | 9.6 |
| Max L/hr | | 1383 | 1829 | 2194 | 2684 | 3226 | 4054 | 4479 | 5043 |
| Max m³/hr | | 1.4 | 1.8 | 2.3 | 2.6 | 3.5 | 4.1 | 4.4 | 5.0 |

*Sound pressure levels given for standard heater without applied ductwork

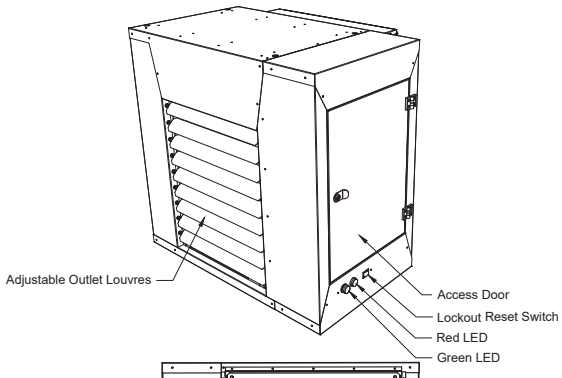
## EPUA Range Automatic Ignition

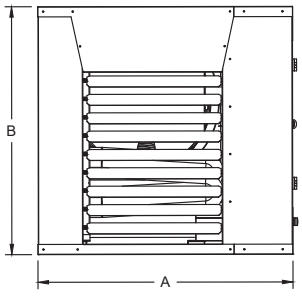
- Natural gas (G20) or LPG (G30 & G31) suspended tubular unit heater
- Automatic Ignition
- Fully modulating burner
- Stainless steel heat exchanger
- Horizontal louvred front panels for free blowing air discharge.
- Room sealed or open flue
- Vertical or horizontal flue


| Dimension data, EPUA | | | EPUA30 | EPUA40 | EPUA50 | EPUA60 | EPUA75 | EPUA90 | EPUA100 | EPUA115 |
|---|---|---|---|---|---|---|---|---|---|---|
| A | Width | mm | 970 | 970 | 1077 | 1077 | 1511 | 1511 | 1758 | 1758 |
| B | Height | mm | 942 | 942 | 991 | 991 | 933 | 933 | 994 | 994 |
| C | Depth | mm | 555 | 555 | 650 | 650 | 650 | 650 | 650 | 650 |
| D | Overall Depth | mm | 870 | 870 | 965 | 965 | 965 | 965 | 965 | 965 |
| E | Gas connection height from base | mm | 244 | 244 | 294 | 294 | 232 | 232 | 232 | 232 |
| F | Gas connection from nearest side | mm | 99 | 99 | 97 | 97 | 86 | 86 | 86 | 86 |
| G | Flue outlet height from base | mm | 123 | 123 | 133 | 133 | 125 | 125 | 135 | 135 |
| H | Flue outlet from nearest side | mm | 307 | 307 | 304 | 304 | 380 | 380 | 451 | 451 |
| J | Support spacing width | mm | 712 | 712 | 819 | 819 | 1187 | 1187 | 1435 | 1435 |
| K | Support spacing depth | mm | 409 | 409 | 464 | 464 | 464 | 464 | 464 | 464 |
| | Flue & air intake diameter | mm | 80 | 80 | 80 | 80 | 100 | 100 | 130 | 130 |
| | Weight | Kg | 94 | 94 | 109 | 109 | 155 | 155 | 178 | 178 |

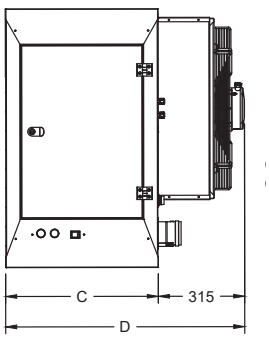



Heater Top View

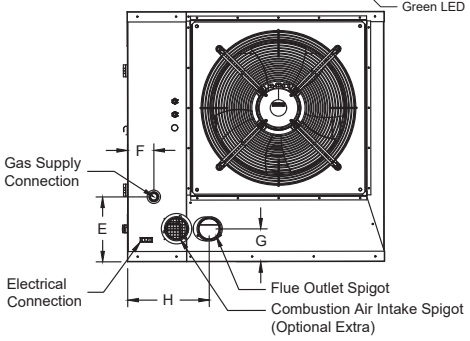



Heater Front View



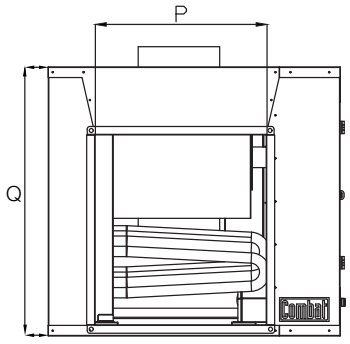

Heater Side View



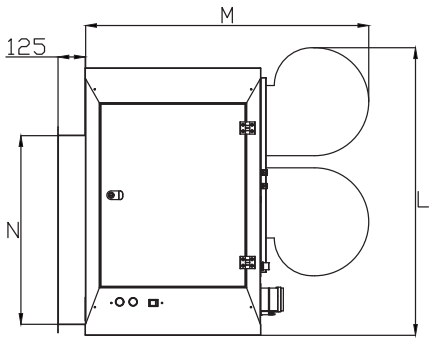

Heater Rear View

# Elite Pro
## Unit Heaters

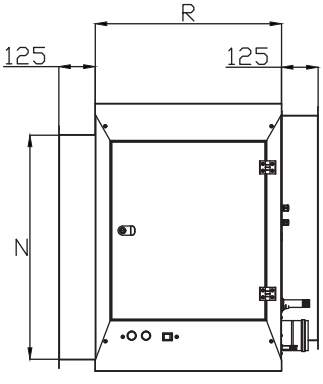
| Dimension data, EPUB/C/D | | | EPU30 | EPU40 | EPU50 | EPU60 | EPU75 | EPU90 | EPU100 | EPU115 |
|---|---|---|---|---|---|---|---|---|---|---|
| L | EPUB height | mm | 942 | 942 | 1064 | 1064 | 932 | 932 | 1012 | 1012 |
| M | EPUB depth | mm | 954 | 954 | 1051 | 1051 | 1112 | 1112 | 1112 | 1112 |
| Q | EPUC height | mm | 942 | 942 | 1177 | 1177 | 933 | 933 | 994 | 994 |
| R | EPUD overall depth | mm | 555 | 555 | 650 | 650 | 650 | 650 | 650 | 650 |
| N | Inlet and outlet duct spigot height | mm | 660 | 660 | 945 | 945 | 660 | 660 | 660 | 660 |
| P | Inlet and outlet duct spigot width | mm | 660 | 660 | 737 | 737 | 1177 | 1177 | 1450 | 1450 |
| | Weight EPUB | kg | 102 | 102 | 136 | 136 | 173 | 173 | 230 | 230 |
| | Weight EPUC | kg | 112 | 112 | 146 | 146 | 183 | 183 | 236 | 236 |
| | Weight EPUD | kg | 92 | 92 | 106 | 106 | 143 | 143 | 176 | 176 |



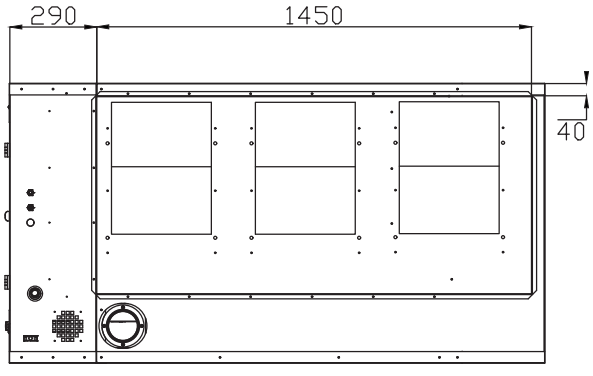
Front View B/C All Models



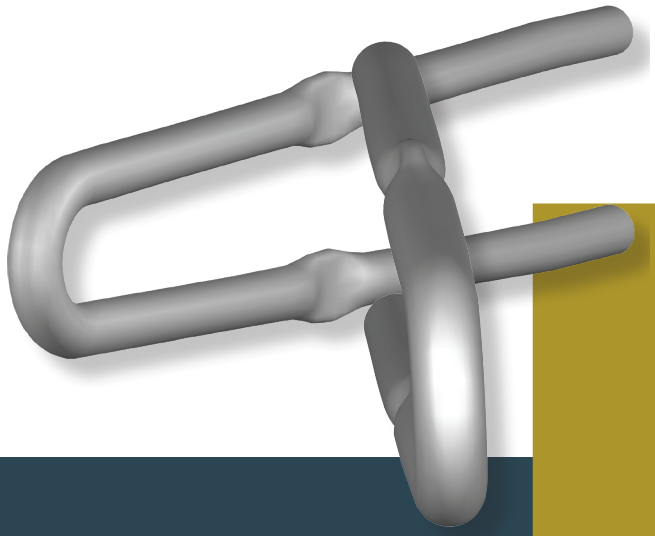
End View B/C All Models



Front View D All Models



Rear View B/C 100-115



# New Style Heat Exchanger

## A new design for enchanced energy efficiency

**Heat Exchanger Tube 'Dimples'**

Heat exchangers are designed to combust fuel (usually gas) and then force the combustion gases through a series of tubes to ultimately reach a flue system and vent to outside. A distribution fan then pushes air across the heat exchanger to deliver warm air.

If the gases travel through the heat exchanger too quickly the distribution air fan will not have enough time to 'scrub' the heat off the heat exchanger which will result in cool leaving air temperatures and high flue temperatures. High flue temperatures mean too much of the heat is being wasted and the appliance efficiency will be poor.
The challenge, for design, is to balance the combustion, heat output and distribution air.

**How is this done?**

We partially achieve this by restricting the flow of gases through the tubes. This slows down the speed of travel and gives more time for the distribution air fan to 'scrub off' more heat. Restrictors also act as 'mixers' which spread the gases more evenly around the inner surface of the tube.

Restricting the flow of the gases can be achieved in several ways. Inserts or turbolators can be inserted into the tubes or the tube diameter can be reduced (by means of a 'dimple') in various places.

The dimples in the tubes are a purposely designed feature to greatly improve the efficiency of the appliance. Unit heater tubes have always had dimples in them for this reason. On previous models the gases flow from front to back so the dimples are at the rear of the appliance. On the latest design the gases flow from top to bottom so the dimples are more visible.

# **Elite Pro**
# Flue Components

| **Room Sealed Components EPU Pro Range** Description | Flue | EPU Pro Models 30-60 (80mm) | EPU Pro Models 75-90 (100mm) | EPU Pro Models 100-115 (130mm) |
|---|---|---|---|---|
| | | Part No | Part No | Part No |
| Combustion air inlet adaptor | Vert/Horiz | 90501025k | 90501030K | 90501040K |
| Flue bracket c/w wall plug & stud | Vert/Horiz | F941 | F942 | F943 |
| Flue bracket extension stud c/w wall plate | Vert/Horizl | F940 | F940 | F940 |
| Sealed pipe 1m length | Vert/Horiz | F921 | F911 | F912 |
| Sealed pipe 0.5m length | Vert/Horiz | F951 | F952 | F953 |
| 90º bend | Vert/Horiz | F923 | F913 | F915 |
| 45º bend | Vert/Horiz | F922 | F914 | F916 |
| Vertical roof terminal | Vertical | F925 | F901 | F905 |
| Plastic cup (cravat) | Vertical | F924 | F903 | F907 |
| Masterflash (c/w fixing kit) | Vertical | F322 | F323 | F323 |
| Masterflash with ali apron (c/w fixing kit | Vertical | F319 | F319 | F319 |
| Horizontal wall terminal | Horizontal | F926 | F904 | F908 |
| Manifold for horizontal | Horizontal | F928 | N/A | N/A |
| **Open Flued Components EPU Pro Range** Description | Flue | EPU Pro Models 30-60 (80mm) | EPU Pro Models 75-90 (100mm) | EPU Pro Models 100-115 (130mm) |
| | | Part No | Part No | Part No |
| Flue bracket c/w wall plug & stud | Vert/Horiz | F941 | F942 | F943 |
| Flue bracket extension stud c/w wall plate | Vert/Horiz | F940 | F940 | F940 |
| Sealed pipe 1m length | Vert/Horiz | F921 | F911 | F912 |
| Sealed pipe 0.5m length | Vert/Horiz | F951 | F952 | F953 |
| 90º bend | Vert/Horiz | F923 | F913 | F915 |
| 45º bend | Vert/Horiz | F922 | F914 | F916 |
| Terminal | Vert/Horiz | F073A | F074A | F075A |
| Masterflash (c/w fixing kit) | Vert/Horiz | F322 | F322 | F322 |
| Masterflash with ali apron (c/w fixing kit) | Vert/Horiz | F319 | F319 | F319 |

# Flue accessories

## Fans & Controllers

| Accessories Description | Part No if ordered separately |
|---|---|
| ¾" Flex gas connection | L802 |
| 1" Flex gas connection | L801 |
| EPU 30-40 vertical louvre kit | VL3040 |
| EPU 50-60 vertical louvre kit | VL5060 |
| EPU 75-90 vertical louvre kit | VL7590 |
| EPU 100-115 vertical louvre kit | VL100115 |
| 30-40 downhead | E501 |
| 50-60 downhead | E502 |
| 75-90 downhead | E503 |
| 100-115 downhead | E504 |

### HVE De-stratification fans

Reduce your heating and cooling costs while minimising your C02 emissions with our Combat De-stratification systems, one of the most effective energy-saving technologies on the market.

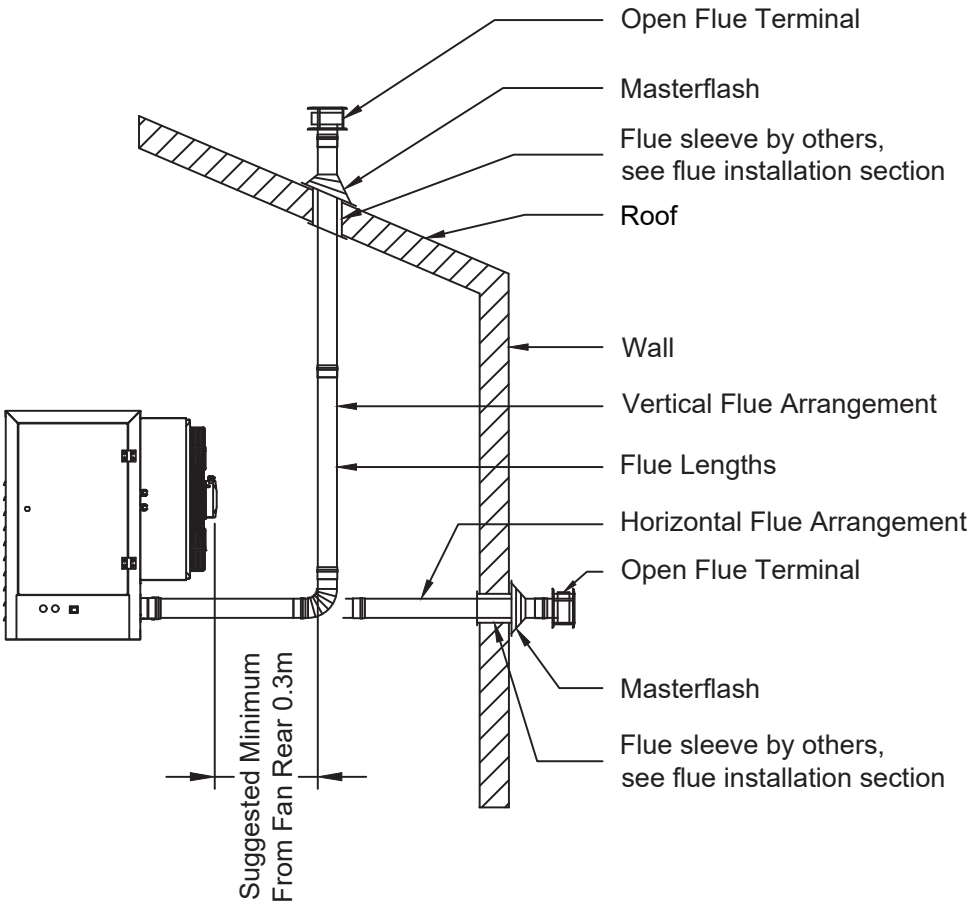
Our HVE fans are designed to eliminate thermal stratification in your building by continuously circulating and mixing the internal air, ensuring balanced and equalised temperatures between the floor and ceiling – a process known as thermal de-stratification.

This not only significantly reduces the workload for heating and cooling systems but also leads to substantial energy savings and a reduced carbon footprint.


### The Enercal Space 10

- One control for all single zone heating applications, unit heaters, cabinet heaters and radiant tubes (Maximum of eight standard radiant tubes)
- Microprocessor based 100-year calendar clock with battery back up
- Optimum start, built in warm air sensor with options for a remote warm air sensor or a radiant sensor with auto sensing and calibration.
- Engineer's menu/end users menu via numeric code entry system
- Very simple set up, supplied with a set of default settings for on/off times and temperature
- Multiple languages, plug in convenience

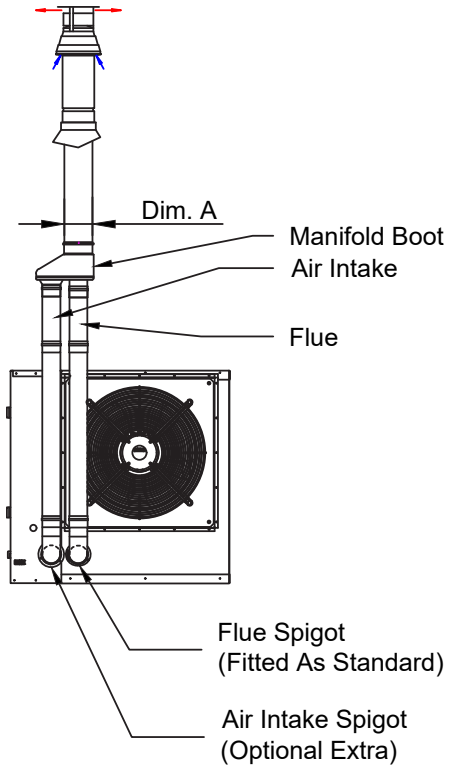
# **Elite Pro**
# Unit Heaters Flues

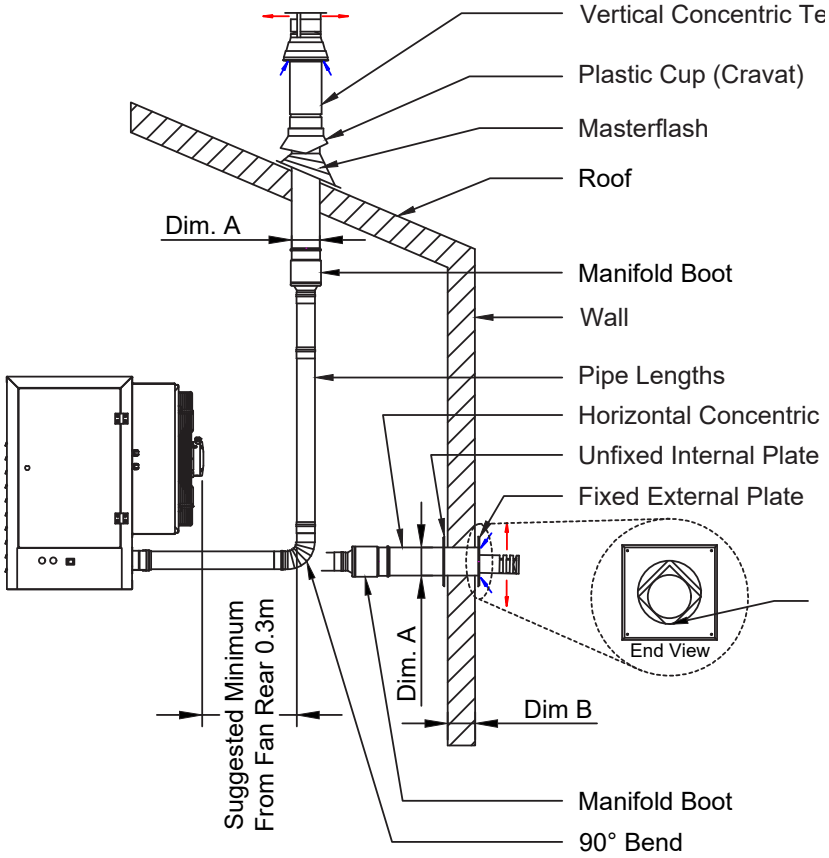



| Models | Flue |
|---|---|
| 30-60 | 80mm Ø |
| 75-90 | 100mm Ø |
| 100-115 | 130mm Ø |

Note:
When using a type C or D unit heater, the actual flue configuration may need to be different to that shown depending on the proposed route of inlet ductwork.

# Flue Diagrams




| Models | Flue | Dim. A | Dim. B |
|---|---|---|---|
| 30-60 | 80mm Ø | 125mm Ø | 0.5m |
| 75-90 | 100mm Ø | 150mm Ø | 0.3m |
| 100-115 | 130mm Ø | 200mm Ø | 0.4m |

Note:
When using a type C or D unit heater, the actual flue configuration may need to be different to that shown depending on the proposed route of inlet ductwork.

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