

**Combat** HVAC  
LIMITED  
**Elite**

**ELUA Models  
40-115**



# Unit Heaters

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# Installer Responsibilities

To install the heater, as well as the fuel and electrical supplies, in accordance with applicable specifications and codes. Combat HVAC Limited recommends the installer contact a local building inspector, Fire Officer or insurance company for guidance.

To use the information given in this manual together with the local and national codes to perform the installation.

To install the heater in accordance with the clearances to combustibles of this heater.

To furnish all needed materials not furnished as standard equipment.

To plan the location of supports, flues and air intakes.

To provide access to burners for servicing.

To provide the owner with a copy of this installation, commissioning, operation and service manual.

To never use heater as support for ladder or other access equipment and never hang or suspend anything from the heater

To ensure that there is sufficient ventilation in the area to comply with the requirements of all relevant local and national codes.

To ensure the heater is placed in an approved application.

Combat HVAC Limited cannot be responsible for ensuring that all appropriate safety measures are undertaken prior to installation; this is entirely the responsibility of the installer. It is essential that the contractor, the sub-contractor, or the owner identifies the presence of combustible materials, corrosive chemicals or halogenated hydrocarbons\* anywhere on the premises.

\* Halogenated Hydrocarbons are a family of chemical compounds characterized by the presence of halogen elements (fluorine, chlorine, bromine, etc.). These compounds are frequently used in refrigerants, cleaning agents, solvents, etc. If these compounds enter the air supply of the burner, the lifespan of the heater components will be greatly reduced. Warranty will be invalid if the heater is exposed to halogenated hydrocarbons.

## National Standards and Applicable Codes

All appliances must be installed in accordance with the latest revision of applicable standards and local and national regulations. This refers also to the electric, gas and venting installation. Note: Additional standards for installations in public garages, aircraft hangars, etc. may be applicable.

## Laminated Wall Plate

A laminated wall plate is available for the heater as a permanent reminder of the safety instructions and the importance of the required clearances to combustibles. Affix the plate by peeling off the backing of the adhesive strips on the rear surface and position the plate on a wall near the heater

A copy of the wall plate is illustrated on the back cover. Know your model number and installed configuration. The model number and installed configuration are found on the burner and in the Installation, Commissioning, Operation and Service Manual. Write the largest clearance dimensions with permanent ink according to your model number and configuration in the open spaces on the plate.



# "UNSURPASSED PRODUCT UNRIVALLED SERVICE"



Combat HVAC Limited does not measure the 50 years of manufacturing success on just one element; it is a result of a number of contributing factors.

## UNSURPASSED PRODUCT

Our Research and Development Engineers work on continuous improvement programs to provide products that are not only meeting industry standards, but will deliver efficient, economical heating solutions for a wide variety of applications; including Warehouses, Transport Depots, Retail Premises, Aircraft Hangars, Garden Centres and Greenhouses, Auto Body Shops and so much more.....

## UNRIVALLED CUSTOMER SERVICE

Combat believe people are our greatest asset. We have a committed, enthusiastic and caring team who are extremely knowledgeable about our products and our customer's needs.

We strive to ensure an Awesome Customer Experience is provided from enquiry, through to delivery, supported by our dedicated members of the Technical, Customer Service and Engineer Teams.

Our people have many years of collective experience in designing and proposing the best Heating Solution, backed up by our unrivalled commitment to Customer satisfaction.

# FEATURES



For room sealed  
or open flue installation



Easy to install, maintain and operate with rear flue spigot



Heater status indicator lamps



Suspended or shelf mounted installation



Long life provided by aluminised steel heat exchangers  
(stainless steel options available)



Operated using Combat NRG Controller



Now in Combat Red (available in white upon request)

# BENEFITS



Our New **ELITE** range of Warm Air Unit Heaters now incorporate a new innovative air stream system which offers enhanced energy efficiency.

They are easy to install, maintain and operate with a wide range of options. Which can be installed as room sealed or open flued. The heaters have automatic ignition burners for ON/OFF operation only. Lockout indicator lights help make troubleshooting easier.

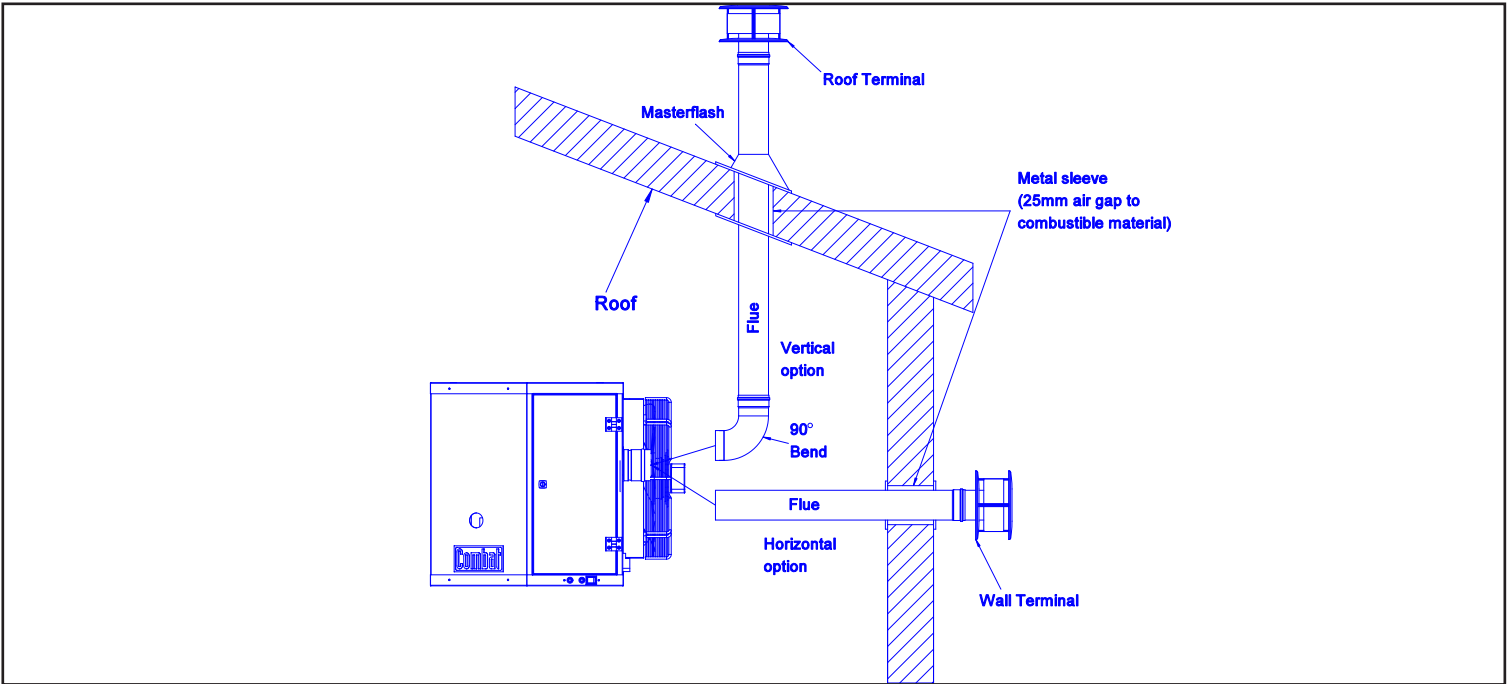
The heaters utilise aluminised heat exchangers (optional stainless steel) for long life. In addition, the heater's suspended or shelf mounted installation free valuable workspace and provide flexibility with several air handling options, such as axial or centrifugal fan or ducted applications.

Technical Flue Data - (All Models)

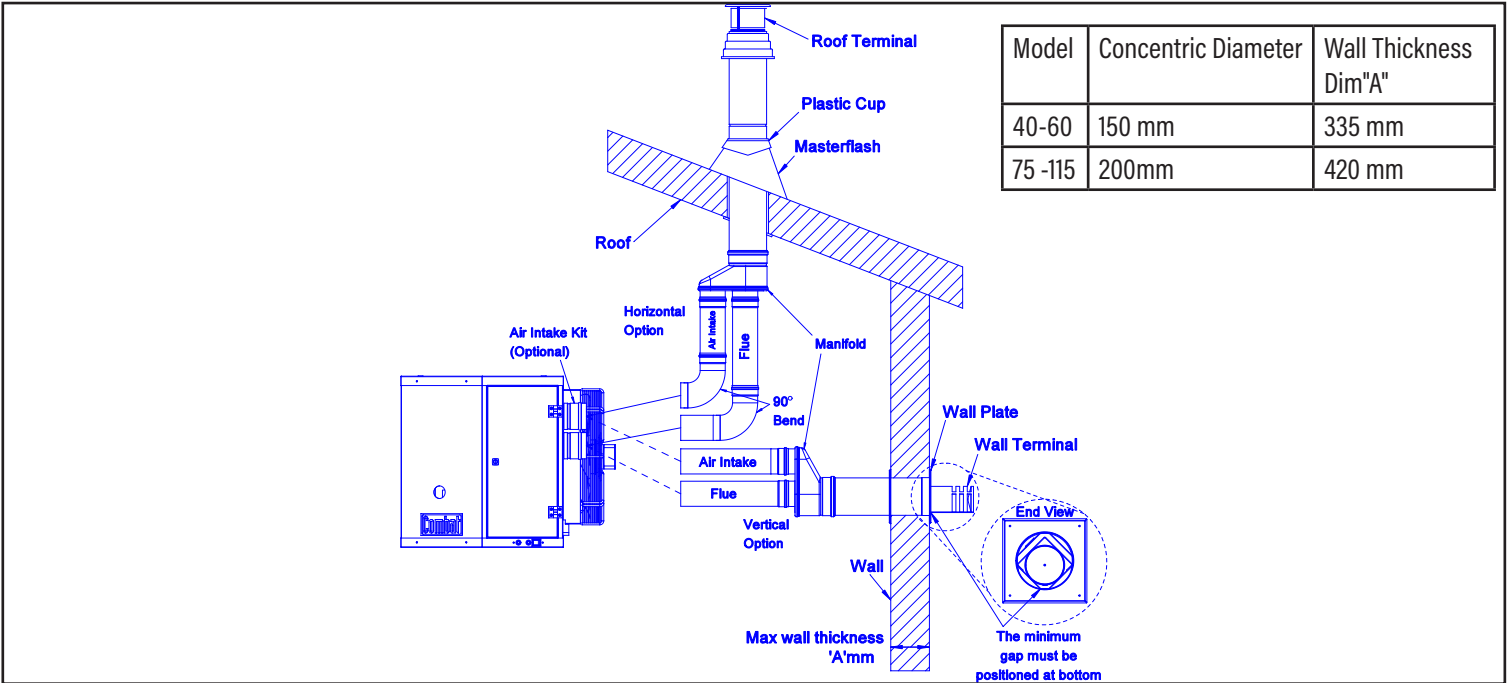
ELU Heaters must be fitted with a flue system. Straight lengths and bends can be added if required. For every additional 90° bend added to the flue, the maximum flue length must be reduced by 1m. For overall length of flue, please refer the relevant section in the general data table.

Note: The flue terminal must not be positioned under a window or anywhere that could draw combustion products back into the building. Each joint in the flue must be made using the manufactured female joint with the special seal.

Specifications Open Flue and Room Sealed Arrangements (All Models)



Specifications Room Flue and Room Sealed Arrangements (All Models)

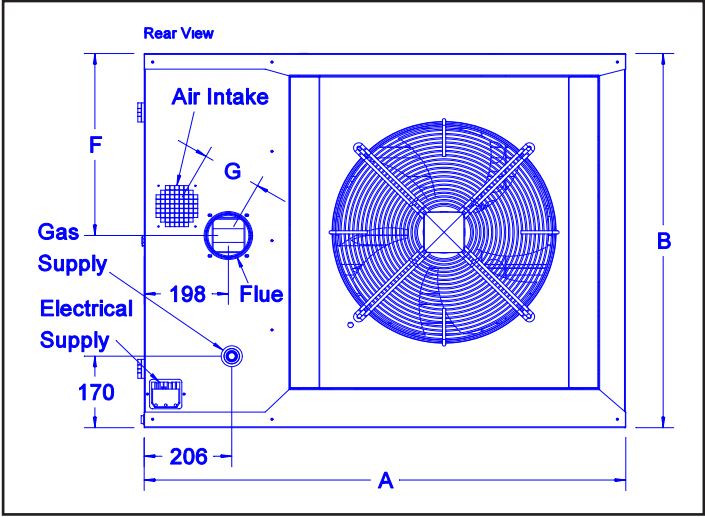


For further information, please refer to the ELU installation, commissioning, operation and service manual.



Dimension Data - ELUA (All Models)

	Model	Unit	40	50	60	75	90	100	115
A	Width	mm	1135	1135	1135	1318	1318	1318	1318
B	Height	mm	682	891	891	1100	1100	1310	1310
C	Support Spacing	mm	448	448	448	631	631	631	631
F	Centre of Flue	mm	277	434	434	348	348	537	537
G	Centre of Flue/Air Intake	mm	140	140	140	225	225	225	225
Z	Length	mm	853	853	853	853	853	853	853
	Flue/Air Intake Pipe Size	mm	100	100	100	130	130	130	130
	Weight	kg	92	115	122	169	169	203	203



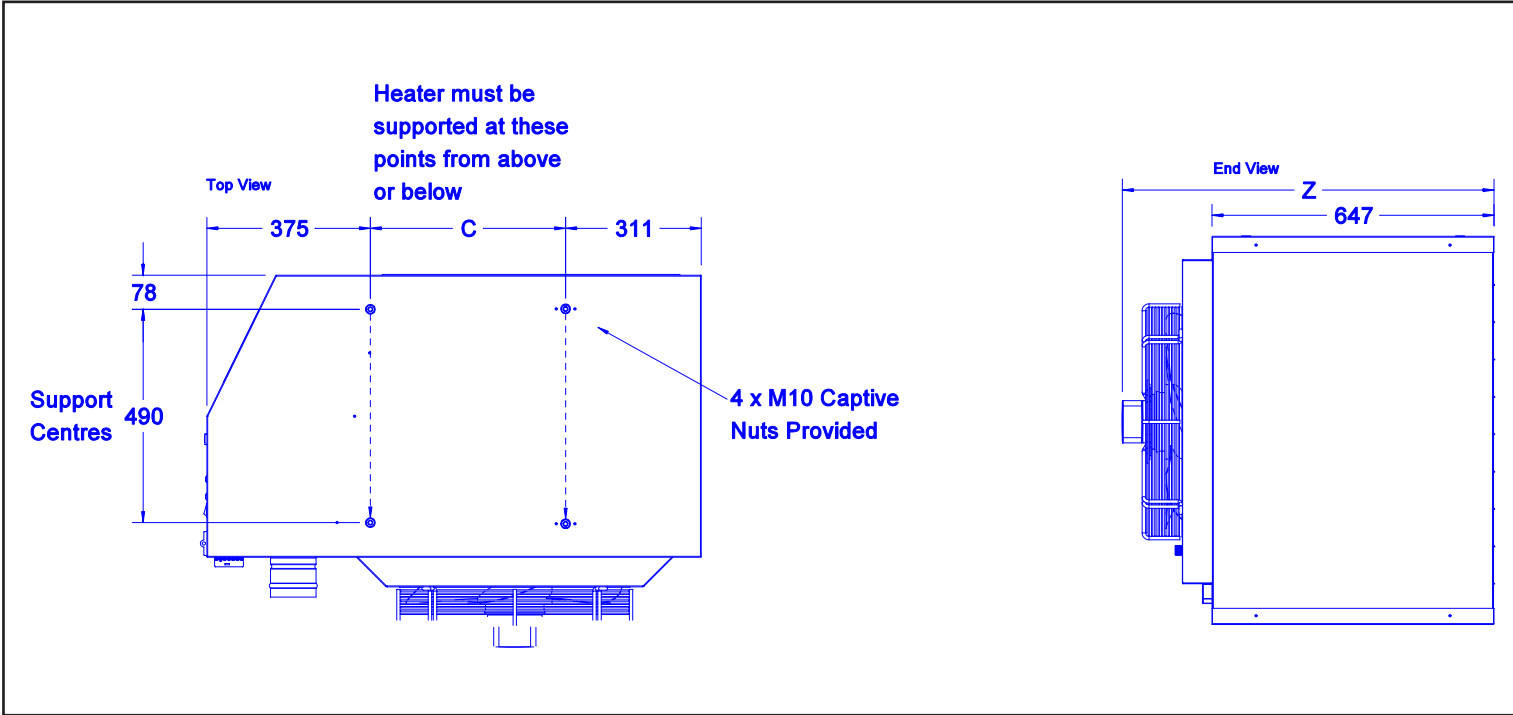
Vertical and Horizontal Heaters - Air Outlet Spigots

Mounting Height to Heater Base	Min Recommended 2.5	Heaters may be mounted at a higher level if destratification fans
(m)	Max Recommended 3.5	and/or downflow discharge head installed

Heater Clearances to Combustibles (mm)

Above Heater	Below Heater	To Rear of Heater	To Front of Heater	To Flue
150	250 - 350	600	3000	50

Specifications - ELUA (All Models)



Technical Data Table Appliance Category II

	Model	ELU 40	ELU 50	ELU 60	ELU 75	ELU 90	ELU 100	ELU 115
Heat Input (Gross CV)	kW	47.7	61.5	71.3	95.0	111.0	119.0	134.7
Heat Input (Net CV)	kW	43.0	55.4	64.2	85.6	100.0	107.2	121.4
Approximate Heat Output	kW	40.0	50.0	60.0	80.0	93.0	100.0	114.0
Thermostat Limit Thermodisc								
ELUA, B, C, D	°C	72.0	72.0	72.0	72.0	72.0	72.0	72.0
Natural Gas (G20) Data - Inlet Pressure 20 mbar. (Min: 17 mbar, Max:25 mbar)								
Burner Pressure	mbar	10.0	10.5	10.0	6.5	6.5	6.5	7.3
Gas Rate	m3/h	4.2	5.4	6.3	8.7	9.8	10.7	12.0
LPG Gas Propane (G31) Data - Inlet Pressure 37 mbar. (Min:25 mbar, Max 45 mbar) Alternative where permitted 50 mbar. (Min:42.5 mbar, Max: 57.5 mbar)								
Burner Pressure	mbar	31.0	31.1	26.3	26.0	23.5	26.0	26.1
Gas Rate	m3/h	1.8	2.3	2.6	3.5	4.1	4.4	5.0
	kg3/h	3.3	4.3	4.8	6.5	7.6	8.1	9.3
	litres/h	6.9	8.9	10.0	13.5	15.8	16.9	19.3
Gas Connection								
ELUA, B, C, D		R - ½"	R - ½"	R - ½"	R - ¾"	R - ¾"	R - ¾"	R - ¾"

General Data Table

	Model	ELU 40	ELU 50	ELU 60	ELU 75	ELU 90	ELU 100	ELU 115
ELUA With Axial Fan								
Total Electrical Load	W	729	729	867	1477	1477	1661	1661
Run Current	A	2.8	2.8	3.4	5.7	5.7	6.5	6.5
Start Current	A	6.2	6.2	6.8	12	12	13	13
Air Flow	m3/h	5800	7900	8500	13000	14600	14600	15300
Sound Pressure Level at 3m	[NR]	[51]	[52.1]	[52.1]	[52.3]	[52.3]	[52.3]	[52.3]
	dB(A)	56	57.1	57.1	57.3	57.3	57.3	57.3
ELUB With Centrifugal Fan and ELUC With Centrifugal Fan and Duct Inlet								
Total Electrical Load	W	1695	3167	3167	3581	3581	5444	5444
Normal Run Current	A	7.0	13.4	13.4	15.2	15.2	23.3	23.3
Normal Start Current	A	10.5	20.0	20.0	22.8	22.8	30.0	30.0
Normal Speed		High	High	High	High	High	High	High
Air Flow	m3/h	5800	7900	8500	13000	14600	14600	15300
Sound Pressure Level at 3m	[NR]	[59]	[61]	[61]	[62]	[62]	[63]	[63]
	dB(A)	59.5	61.5	61.5	61.8	61.8	64.2	64.2
ELUD Duct Heater With No Fan								
Minimum Air Flow Required**	m3/h	5800	7900	8500	13000	14600	14600	15300
Pressure Loss Across Heat exchanger	Pa	30	30	30	30	30	30	30
Flue and Air Intake (please see additional information on page 1, Technical Flue Data)								
Flue and Air Intake Size	mm Ø	100	100	100	130	130	130	130
Maximum Straight Flue/Air Intake*	m	10	13	15	15	17	20	20

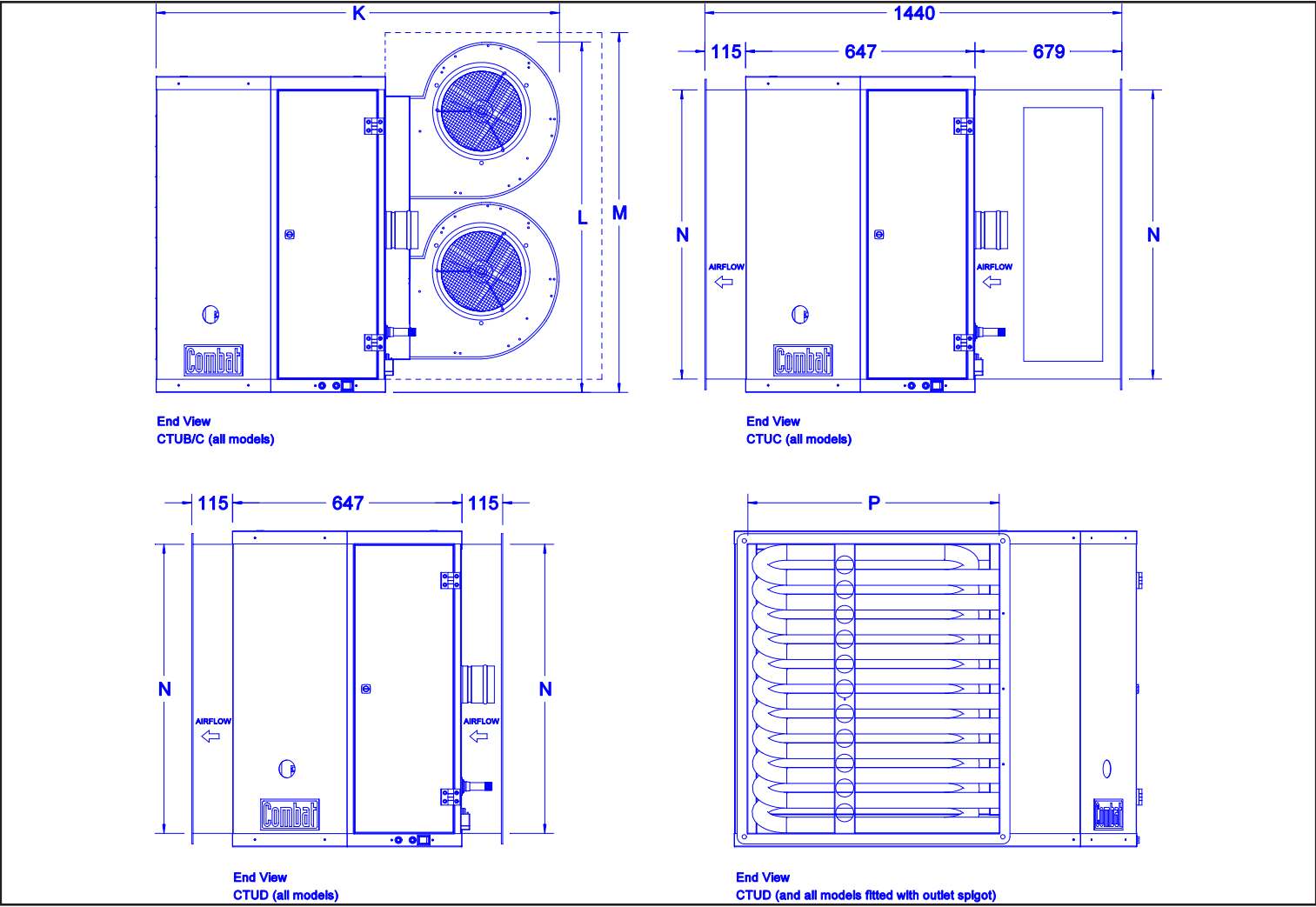


Dimension Data - ELUB, ELUC, ELUD (All Models)

	Model	Unit	40	50	60	75	90	100	115
K	ELUB Depth	mm	1026	1026	1026	1076	1076	1076	1076
L	ELUB Height	mm	680	895	895	1100	1100	1380	1380
M	ELUC Height	mm	610	895	895	1100	1100	1431	1431
N	Inlet and Outlet Duct Spigot Height	mm	534	817	817	1024	1024	1233	1233
P	Inlet and Outlet Duct Spigot Height	mm	709	707	707	888	888	888	888
	Weight ELUB	kg	104	139	146	210	210	237	237
	Weight ELUC	kg	117	157	163	215	215	260	260
	Weight ELUD	kg	101	124	131	181	181	209	209

Specifications - ELUB, ELUC, ELUD (All Models)

Above Heater	Below Heater	To Rear of Heater	To Front of Heater	To Flue
150	250 - 350	600	300	50



# WHY COMBAT?



## 100% British Manufactured

UK manufactured in the heart of the Engineering Industry at Wednesbury, West Midlands with access to all prime motorway networks



## High Levels of Stock All Year Round

With year round availability and high levels of stock ready to ship, we only promise what we can deliver.



## Our Distribution Network

Combat HVAC distributes to a vast network of industrial and commercial heating suppliers nationwide. We offer delivery direct to site throughout the UK and Europe.



## Our Service

Combat HVAC provides a fully comprehensive service that includes site surveys, bespoke heating system designs, commissioning, after sales service, spares and technical support.



## Over 50 Years Manufacturing Expertise



## Our Customer Service Team

We are proud of our dedicated After Care Team who provide Unrivalled Customer Service from placement of order through to dispatch.



## Our Experienced Sales Team

Our Sales Managers are dedicated to providing the most energy efficient solutions to suit a wide variety of Industrial and Commercial applications.



## Ignition Systems

ELU heaters are automatic ignition burners

## Burner Options

ELU heaters are fitted with on/off burners as standard

## Air Outlets

ELUA, ELUB and ELUC heaters are fitted with adjustable horizontal louvres as standard. ELUB and ELUC available with optional spigot. For ducted ELUB, ELUC and ELUD ductwork would need to be designed to adhere to the characteristics of the heater against resistance. Fans curves are available upon request from Combat HVAC Limited.

**Note:** When employing an inlet duct arrangement, there must be adequate provision for the supply of combustion air. Please contact Combat HVAC Limited for advice. If a heater is to be attached to ducting for warm air distribution, then an outlet duct spigot can be provided.

In these instances, advice should be sought to ensure that proposed duct systems are compatible with the heater.

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## Important Notice

The equipment described in this data sheet is suitable for most commercial and industrial heating applications. However, in certain environments, particularly where there is a chlorinated atmosphere (e.g. near a degreasing plant or other solvent processes), or a particularly dusty atmosphere, specialist advice should be sought at the design stage.

Please consult your local Combat HVAC Sales Manager.

Combat HVAC Limited reserves the right to alter product specification details without notice.

### Installation Code and Annual Inspections:

All installations and servicing of Combat HVAC equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Combat HVAC Limited and conform to all requirements outlined in the Combat manuals and all applicable governmental authorities about the installation, service and operation of the equipment. To help facilitate optimum performance and safety, Combat HVAC Limited recommends that a qualified contractor annually inspect your Combat equipment and perform service where necessary, using only replacement parts supplied by Combat HVAC Limited.

### Further Information:

Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through Combat HVAC representatives. Please contact us for any further information you may require, including the installation, operation and service manual.

**This product is not for residential use.**

**This document is intended to assist licensed professionals in the exercise of their professional judgement.**