# warmatic

**EFFICIENT CLIMATE SOLUTIONS** 



# Zephr.

High Efficiency Gas & Oil Fired Cabinet Heaters

(Condensing option available)



# Gas & Oil Fired Cabinet Heaters

The Zephr range of cabinet heaters combine innovative design with proven heat exchanger technology to provide a high efficiency cost effective and durable range.

The units may be specified for either free blowing applications or for use with ductwork.

### **Model Range**

Gas fired cabinet heaters are suitable for use with Natural Gas (G20), most units can also be specified for Propane (G31).

Oil fired cabinet heaters are suitable for use with Class D gas oil (35 sec). Oil fired cabinets are supplied with a fire value and an oil filter as loose components.

Vertical freestanding models are available from 30kW to 300kW. Contact Warmatic for larger outputs.

Modulating and two stage burners are controlled via standard control panel (supplied loose).

#### **Air Distribution**

EC Plug fan(s) circulate large air volumes evenly across the full heat exchanger surface for enhanced life expectancy.

Free blowing heaters are supplied with (loose) long throw discharge nozzles complete with horizontal louvres which can be rotated through 360°. Models 30-300 are supplied with a raised rear nozzle.

Ductwork can be fitted directly to the top of those heaters requiring ducted discharge.



### **Specification**

#### Cabinet

Cabinets are constructed using sheet metal frame construction with profiles in galvansied powder painted panels to form a rigid and durable casework. Panels for the heating section are provided with internal insulation along with inner heat shields manufactured from aluminised steel.

#### **Electric Motors**

All electric motors comply with EC motor directive 2005/32/EC. This provides better overall electrical efficiency and a more consistent airflow across the heat exchanger. Also improving the overall heat exchanger efficiency.

#### **Heat Exchanger**

Inversion combustion chamber with four pass heat exchanger assembly provides improved thermal efficiency with extended life expectancy. The 304 stainless steel combustion chamber is combined with a high efficiency flat tube heat exchanger to achieve combustion efficiencies of up to 94% (ncv). The complete assembly is mounted to allow for thermal expansion, thereby avoiding undue thermal stress and premature heat exchanger failure.

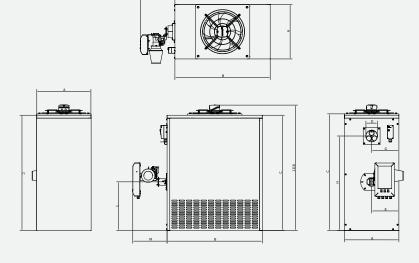
#### Burne

Gas fired units are supplied with a fitted high/low fully automatic forced draught burner complete with full safety controls to EN676. Heaters are CE certified and UKCA approved.

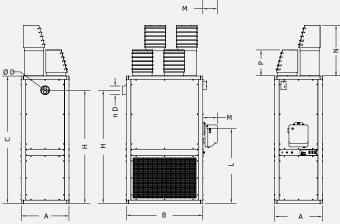
Oil fired units are also supplied with a fitted high/low fully automatic burner including safety controls. Fire valve and oil filter are supplied as loose components. An additional external fire valve may be required in accordance with BS 410: Part2:1978.

## **Dimension details**

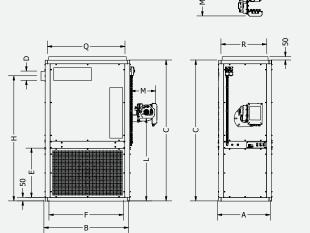
# Model **30**wmi

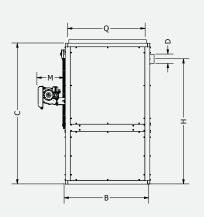


# Model - Nozzle 45-600wmi



# Model - Ducted **45-600**wmi





## **Technical Data**

								MODE	L					
		30	45	60	90	120	150	180	210	260	300	350	450	600
Nominal heat output	kW	30	45	60	90	120	150	180	210	260	300	350	450	600
Heat Input	kW	32	48	64	96	128	160	193	225	278	321	374	481	642
Temperature rise	οС	33	41	41	41	41	41	41	41	39	41	41	41	41
Thermal Efficencies (Nett CV) %		MIN 92%												
NOx Seasonal	mg/kWh	59.3	58.2	62.3	65.3	62.1	65.9	61	63.5	65.3	66.2	61	65.2	60.2
Gas Fired														
Gas Consumption Nat Gas (G20)	m3/h	3.00	4.50	6.00	9.00	11.99	14.99	17.99	20.99	25.99	29.99	34.98	44.98	59.97
Gas Consumption Propane (G31)	m3/	1.24	1.86	2.48	3.72	4.96	6.20	7.44	8.67	10.74	12.39	14.46	18.59	24.79
Minimum dynamic inlet pressure Na	t Gas (G20)	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Minimum inlet pressure Propane (G31)		37	37	37	37	37	37	37	37	37	37	37	37	37
Gas Connection	Rc	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	11/4"	11/4"	11/4"	11/2"	11/2"	11/2"	11/2"
Oil Fired														
Oil Consumption (35sec)	l/h	2.96	4.44	5.91	8.87	11.83	14.79	17.74	20.70	25.63	29.57	34.50	44.36	59.14
Oil Connection	Rc	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"
Air Handling Data														
Airflow	m3/h	2700	3276	4392	6552	8712	10944	13104	15264	19656	21816	25452	32724	43596
Airflow	m3/s	0.75	0.91	1.22	1.82	2.42	3.04	3.64	4.24	5.46	6.06	7.07	9.09	12.11
Numner of Nozzles		0	4	4	4	4	4	4	4	4	4	4	8	8
Nozzled Throw	m	24	26	26	29	32	38	44	46	47	48	48	48	51
External Static Pressure (Ducted)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
Fan	kW	0.65	0.65	0.8	1.2	2.5	2.5	3	3.5	4	7.5	11	11	15
Full Load Current	Α	1.2	1.2	2.3	3.9	4.1	4.5	4.8	5.5	6	7.8	21.5	21.5	28
General Data														
Electrical Supply	Volts	415	415	415	415	415	415	415	415	415	415	415	415	415
Nominal Flue diameter	mm	100	130	130	130	130	130	200	250	250	250	250	300	300
Noise level @ 5m	db(A)	58	58	62	72	72	75	76	77	78	79	79	76	79
Net Weight	kg	259	338	343	354	385	458	497	543	574	598	986	1430	1512

Natural Gas @ 38.52 Mj/m3  $\,$  I  $\,$  LGP @ 93.2 Mj/m3  $\,$  I  $\,$  Oil @ 39.06 Mj/I

# **Dimensions (mm)**

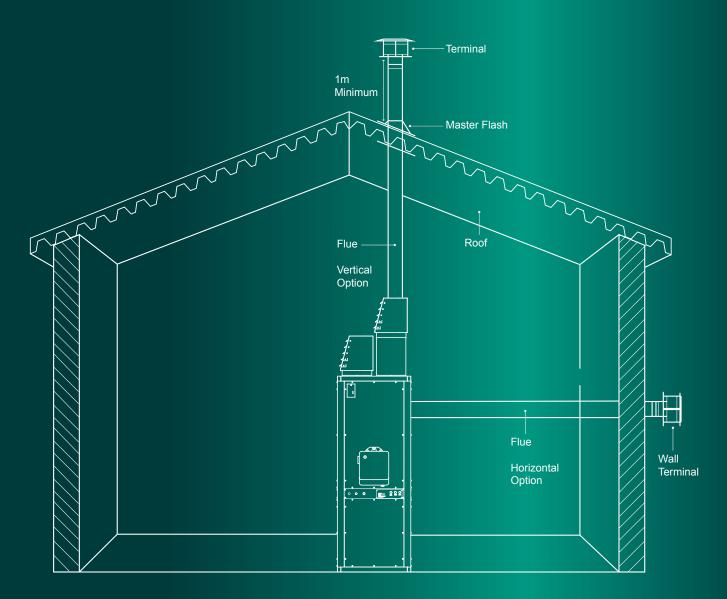
	MODEL												
	30	45	60	90	120	150	180	210	260	300	350	450	600
A - Unit Width	485	800	800	800	800	800	950	950	1100	1100	1100	1500	1500
B - Unit Depth	848	950	950	950	1200	1200	1400	1520	1520	1520	2200	2400	2400
C - Unit Height	1038	2000	2000	2000	2000	2000	2250	2250	2250	2250	2250	3350	3350
D - Flue Diameter	100	130	130	130	130	130	200	250	250	250	250	300	300
E - Intake Duct	POA	650	650	650	650	650	650	650	650	650	650	900	900
F - Intake Duct	POA	850	850	850	1100	1100	1300	1300	1420	1420	2100	2300	2300
G - Flue Centre	243	375	375	375	375	375	475	475	575	575	575	750	750
H - Flue Height	1038	1777	1777	1777	1777	1777	1970	1970	1970	1970	1970	3070	3070
K - Burner Centre	243	375	375	375	375	375	475	475	575	575	575	750	750
L - Burner Height	433	1176	1176	1176	1176	1176	1250	1250	1250	1250	1250	1450	1450
M - Burner Protrusion	305	230	230	230	230	230	560	560	560	560	563	563	623
N - Ext Nozzel Height	N/A	798	798	798	798	798	949	949	949	959	949	949	949
P - Nozzel Height	N/A	409	409	409	409	409	547	547	547	547	547	547	547
Q - Duct Outlet	N/A	N/A	850	850	1100	1100	1300	1300	1420	1420	2100	2300	2300
R - Duct Outlet	N/A	N/A	700	700	700	700	850	850	1000	1000	1000	1400	1400
S - Condensate size (if fitted)	3/4"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"

## Installation

#### **Horizontal flue**

Option for horizontal flue termaination to model 150, flue size is 130mm.

Please note: The correct horizontal flue terminal can be supplied by **Warmatic**.



The horizontal flue installation allows for reduced flue run as there is no requirement to install the flue to the top of the building as with normal conventional flue systems, saving on time and flue materials for the installing contractor

For futher information please see the heater manual.

#### **About Us**

Warmatic Limited are a British manufacturer, offering bespoke efficient climate solutions to the commercial industry, in order to help our client's achieve their desired environmental conditions.

Established in 2020 by two work colleagues that have vast experience within the HVAC and manufacturing industry, our business operates on two main core values;

To build and maintain long-term customer relationships

To fulfill the demands of our client by producing high quality and efficient products

We specialise in the design and manufacture of bespoke air handling and temperature controlled units such as AHU's (heat pump and DX cooling), gas fired modules, gas fired cabinet heaters, direct and indirect gas fired heaters, air rotation units and de-stratification fans. We also offer bespoke designs to replace existing units, with the option of flat pack delivery to assist in areas of restricted access.

Our products are constantly reviewed in order to ensure we operate at the highest engineering standard whilst also considering our environmental impact. Global warming is at the forefront of our designs in order to help reduce the amount of carbon emissions from our products. We achieve this by using condensing gas fired technology and alternative fuel sources such as heat pumps and hydrogen technology.

We are immensely proud of what we produce. Our stringent quality process and attention to detail is what sets us apart from our competitors. Assisted by our dedicated and talented team who use state of the art design technology, Warmatic also offer a high level of technical advice and site support throughout a project to ensure our clients requirements are achieved.





