Warmatic

Efficient Heating Solutions

Zephr.

High Efficiency Gas & Oil Fired Cabinet Heaters

(Condensing option available)

Warmatic Efficient Climate Solutions

Zephr.

Gas & Oil
Fired Cabinet Heaters

The Zephyr 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.

Specification

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 galvanised 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.

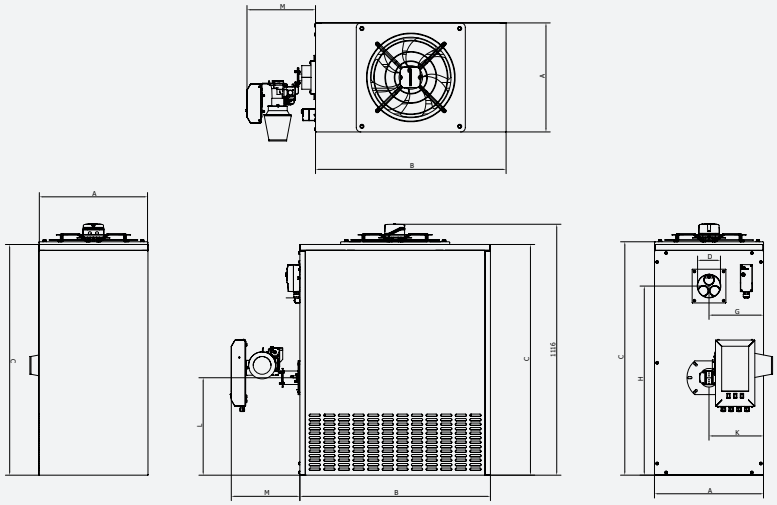
Heat Exchanger
Inversion combustion chamber with four pass heat exchanger assembly provides improved thermal efficiency with extended life expectancy. The 304 stainless steel combustion chamber is combined with a high efficiency flat tube heat exchanger to achieve combustion efficiencies of up to 94%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

Burner
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.

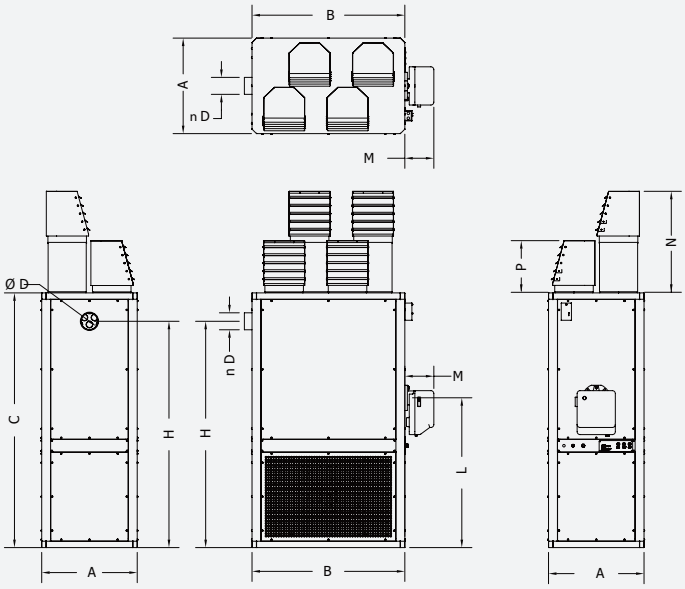
Oil fired units are also supplied with a fitted high/low fully automatic forced draught burner complete with full safety controls. Fire valve and oil fitter are supplied as loose components. An additional external fire valve may be required in accordance with BS 410: Part2:1978.

Internal Dimension Detail

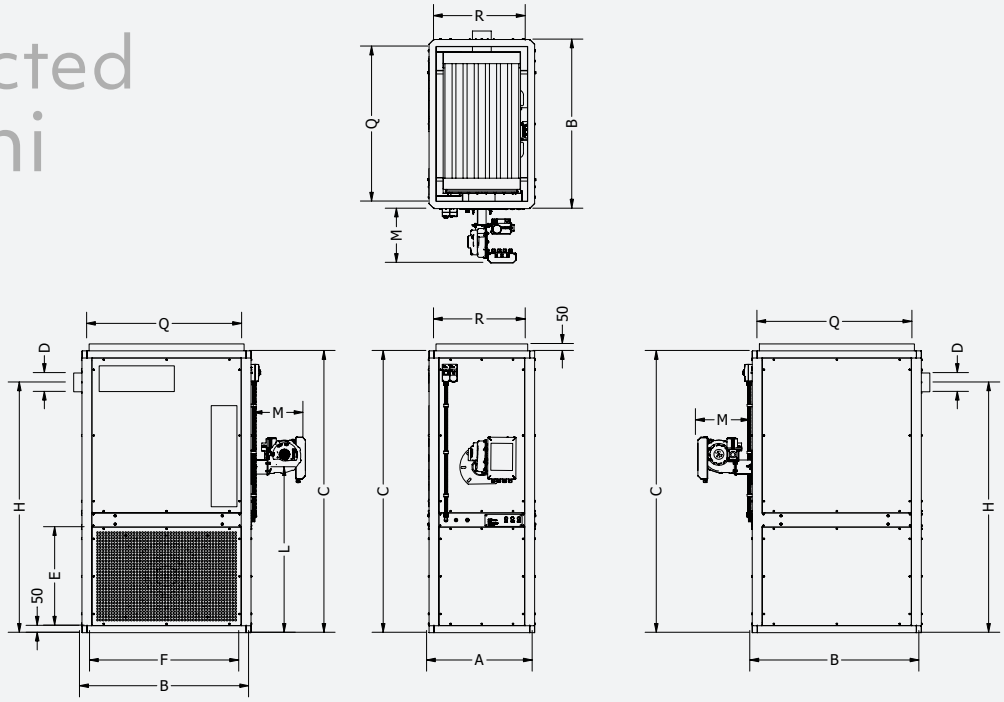
Model
30wmi



Model - Nozzle
45-600wmi



Model - Ducted
45-600wmi



Technical Data

Models	30	45	60	90	120	150	180	210	260	300
Nominal Heat Output (kW)	30	45	60	90	120	150	180	210	260	300
Heat Input (kW)	32	48	64	96	128	160	193	225	278	321
Temperature Rise (°C)	33	41	41	41	41	41	41	41	39	41
Thermal Efficiency (Nett CV %)	Min 92%									
Nox Emission (mg/kW)	59.3	58.2	62.3	65.3	62.1	65.9	61.0	63.5	65.3	66.2
Gas Fired	**30**	**45**	**60**	**90**	**120**	**150**	**180**	**210**	**260**	**300**
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
Gas Consumption LPG (G31) (m3/h)	1.24	1.86	2.48	3.72	4.96	6.20	7.44	8.67	10.74	12.39
Min Inlet Pressure Nat Gas (G20) (mbar)	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Min Inlet Pressure LPG (mbar)	37	37	37	37	37	37	37	37	37	37
Gas Connection (BSP)	½"	¾"	¾"	¾"	¾"	¾"	1¼"	1¼"	1¼"	1½"
Oil Fired	**30**	**45**	**60**	**90**	**120**	**150**	**180**	**210**	**260**	**300**
Oil Consumption 35sec (l/hr)	2.96	4.44	5.91	8.87	11.83	14.79	17.74	20.70	25.63	29.57
Oil Connection (BSP)	⅜"	⅜"	⅜"	⅜"	⅜"	⅜"	⅜"	⅜"	⅜"	⅜"
Air Handling Data	**30**	**45**	**60**	**90**	**120**	**150**	**180**	**210**	**260**	**300**
Airflow (m3/h)	2700	3276	4392	6552	8712	10944	13104	15264	19656	21816
Airflow (m3/s)	0.75	0.91	1.22	1.82	2.42	3.04	3.64	4.24	5.46	6.06
Number of Nozzles	2	2	4	4	4	4	4	4	4	4
Nozzle Throw (m)	24	26	26	29	32	38	44	46	47	48
External Static Pressure (Ducted) (pa)	250	250	250	250	250	250	250	250	250	250
Fan (kW)	0.65	0.65	0.8	1.2	2.5	2.5	3.0	3.5	4.0	7.5
Oil Consumption 35sec (l/hr)	1.2	1.2	2.3	3.9	4.1	4.5	4.8	5.5	6.0	11.5
Generic Data	**30**	**45**	**60**	**90**	**120**	**150**	**180**	**210**	**260**	**300**
Electrical Supply (V)	415	415	415	415	415	415	415	415	415	415
Nominal Flue Diameter (mm)	130	130	130	130	130	130	200	200	250	250
Noise Level @ 5m (dB(A))	58	58	62	72	72	75	76	77	78	79
Net Weight (kg)	259	338	343	354	385	458	497	543	574	598

Dimensions (mm)

Models	30	45	60	90	120	150	180	210	260	300
A - Unit Width	700	700	800	800	800	800	950	950	1100	1100
B - Unit Depth	700	700	950	950	1200	1200	1400	1400	1520	1520
C - Unit Height	1800	1800	2000	2000	2000	2000	2250	2250	2250	2250
D - Flue Diameter	100	130	130	130	130	130	200	250	250	250
E - Intake Duct	POA	650	650	650	650	650	650	650	650	650
F - Intake Duct	POA	850	850	850	1100	1100	1300	1300	1420	1420
G - Flue Centre	375	375	375	375	375	375	475	475	575	575
H - Flue Height	1038	1777	1777	1777	1777	1777	1970	1970	1970	1970
K - Burner Centre	243	375	375	375	375	375	475	475	575	575
L - Burner Height	433	1176	1176	1176	1176	1176	1250	1250	1250	1250
M - Burner Protrusion	305	230	230	230	230	230	560	560	560	560
N - Ext Nozzle Height	N/A	798	798	798	798	798	949	949	949	959
P - Nozzle Height	N/A	409	409	409	409	409	547	547	547	547
Q - Duct Outlet	N/A	N/A	850	850	1100	1100	1300	1300	1420	1420
R - Duct Outlet	N/A	N/A	700	700	700	700	850	850	1000	1000
S - Condensate Size (if Fitted)	¾"	1"	1"	1"	1"	1"	1"	1"	1"	1"

Technical Data

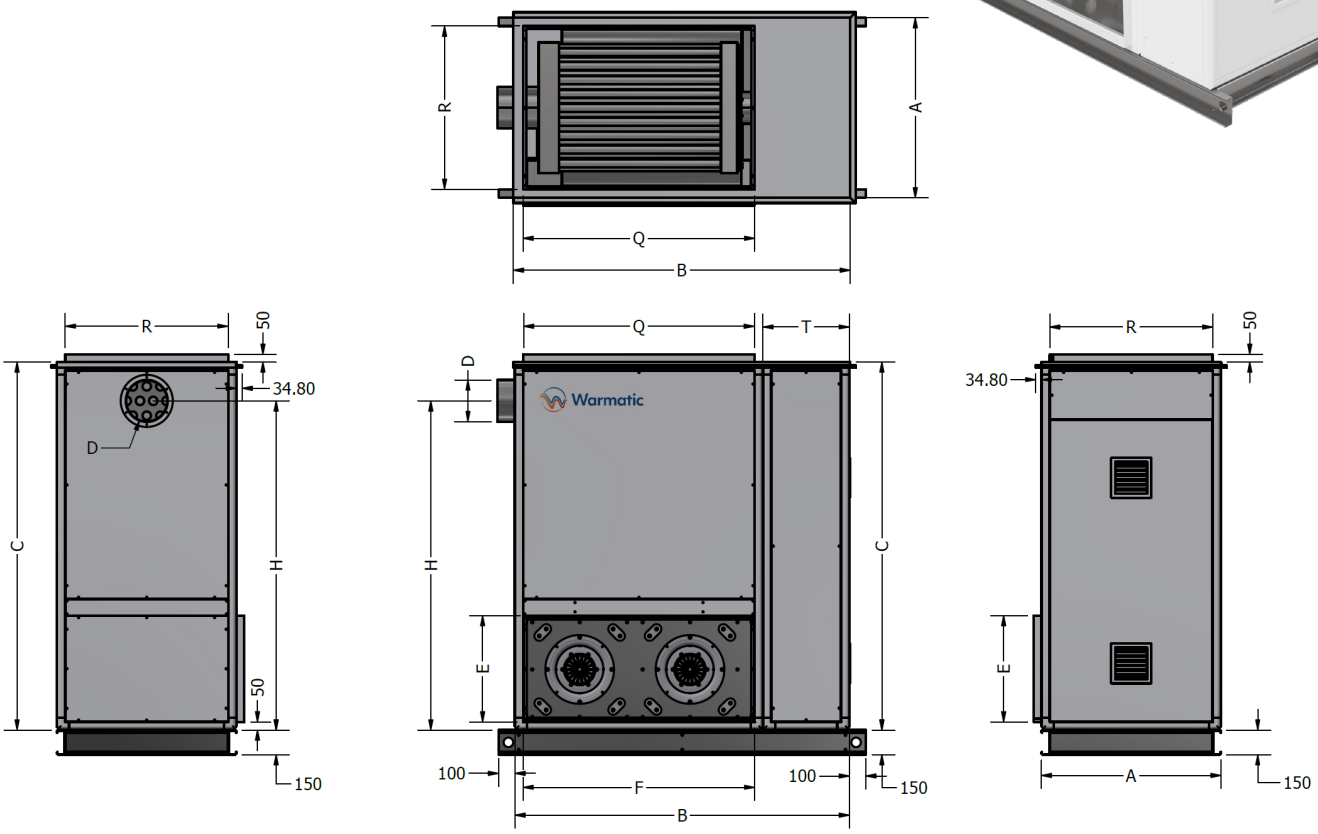
Models	350	450	600	700	800	900	1000
Nominal Heat Output (kW)	350	450	600	700	800	900	1000
Heat Input (kW)	374	481	645	350	400	450	500
Temperature Rise (°C)	41	41	41	41	41	41	41
Thermal Efficiency (Nett CV %)				Min 92%			
Nox Emission (mg/kW)	61.0	65.2	60.2	62.2	63.2	63.0	60.3
Gas Fired	**350**	**450**	**600**	**700**	**800**	**900**	**1000**
Gas Consumption Nat Gas (G20) (m3/h)	34.98	44.98	59.97	69.97	79.96	89.96	99.95
Gas Consumption LPG (G31) (m3/h)	14.46	18.59	24.79	28.92	33.05	37.18	41.31
Min Inlet Pressure Nat Gas (G20) (mbar)	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Min Inlet Pressure LPG (mbar)	37	37	37	37	37	37	37
Gas Connection (BSP)	1½"	1½"	1½"	2"	2"	2½"	2½"
Oil Fired	**350**	**450**	**600**	**700**	**800**	**900**	**1000**
Oil Consumption 35sec (l/hr)	34.50	44.36	59.14	69.00	78.86	88.71	98.57
Oil Connection (BSP)	⅜"	⅜"	½"	½"	½"	½"	½"
Air Handling Data	**350**	**450**	**600**	**700**	**800**	**900**	**1000**
Airflow (m3/h)	25452	32724	43596	50868	59436	65412	72684
Airflow (m3/s)	7.07	9.09	12.11	14.13	16.51	18.17	20.19
Number of Nozzles	4	8	8	8	8	8	8
Nozzle Throw (m)	48	48	51	52	52	52	52
External Static Pressure (Ducted) (pa)	250	250	250	250	250	250	250
Fan (kW)	11.0	11.0	15.0	22.0	22.0	22.0	22.0
Oil Consumption 35sec (l/hr)	21.5	21.5	28.0	32.0	40.0	40.0	60.0
Generic Data	**350**	**450**	**600**	**700**	**800**	**900**	**1000**
Electrical Supply (V)	415	415	415	415	415	415	415
Nominal Flue Diameter (mm)	250	300	300	350	400	400	400
Noise Level @ 5m (dB(A))	79	76	79	79	79	79	79
Net Weight (kg)	986	1430	1512	1704	1704	1850	1850

Dimensions (mm)

Models	350	450	600	700	800	900	1000
A - Unit Width	1100	1500	1500	On Application			
B - Unit Depth	2200	2400	2400	On Application			
C - Unit Height	2250	3350	3350	On Application			
D - Flue Diameter	250	300	300	On Application			
E - Intake Duct	650	900	900	On Application			
F - Intake Duct	2100	2300	2300	On Application			
G - Flue Centre	575	750	750	On Application			
H - Flue Height	1970	3070	3070	On Application			
K - Burner Centre	575	750	750	On Application			
L - Burner Height	1250	1450	1450	On Application			
M - Burner Protrusion	563	563	623	On Application			
N - Ext Nozzle Height	949	949	949	On Application			
P - Nozzle Height	547	547	547	On Application			
Q - Duct Outlet	2100	2300	2300	On Application			
R - Duct Outlet	1000	1400	1400	On Application			
S - Condensate Size (if Fitted)	1"	1"	1"	On Application			

External Dimension Detail

External Cabinet Heater

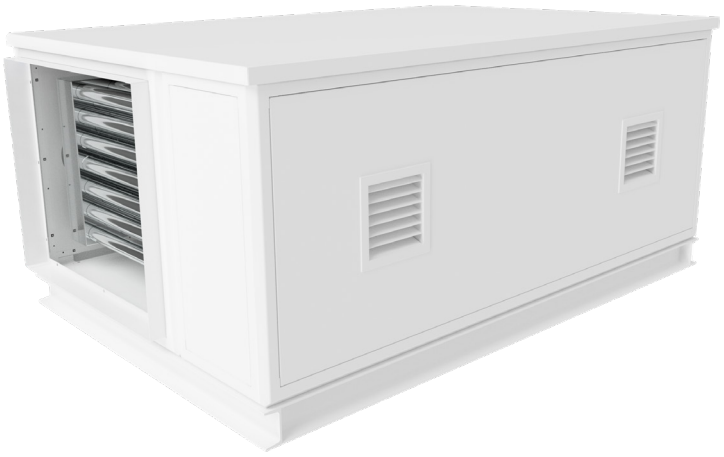


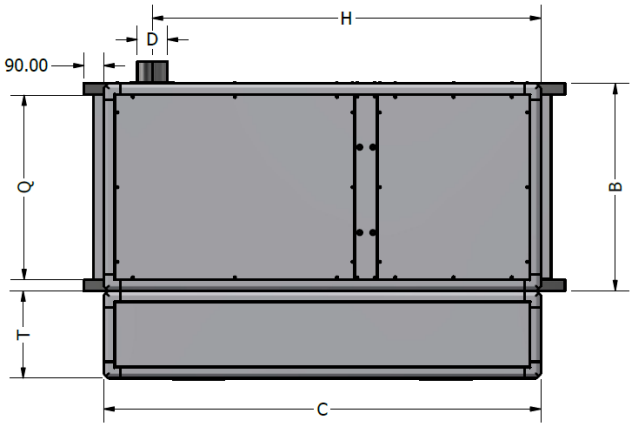
Dimensions (mm)

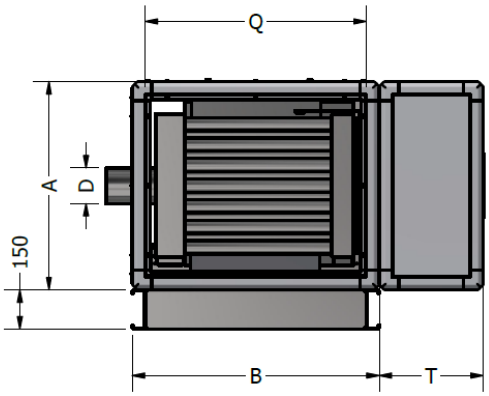
Models	30	45	60	90	120	150	180	210	260	300	350	450	600	700-1000
A - Unit Width	485	800	800	800	800	800	950	950	1100	1100	1100	1500	1500	On Application
B - Unit Depth	848	950	950	950	1200	1200	1400	1520	1520	1520	2200	2400	2400	On Application
C - Unit Height	1038	2000	2000	2000	2000	2000	2250	2250	2250	2250	2250	3350	3350	On Application
D - Flue Diameter	100	130	130	130	130	130	200	250	250	250	250	300	350	On Application
E - Intake Duct	POA	650	650	650	650	650	650	650	650	650	650	900	900	On Application
F - Intake Duct	POA	850	850	850	1100	1100	1300	1300	1420	1420	2100	200	2300	On Application
G - Flue Centre	243	375	375	375	375	375	475	475	575	575	575	750	750	On Application
H - Flue Height	1038	1777	1777	1777	1777	1777	1970	1970	1970	1970	1970	3070	3070	On Application
Q - Duct Outlet	N/A	N/A	850	850	1100	1100	1300	1300	1420	1420	2100	2300	2300	On Application
R - Duct Outlet	N/A	N/A	700	700	700	700	850	850	1000	1000	1000	1400	1400	On Application
S - Condensate Size (if Fitted)	¾"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	On Application
T - Weatherproof Extension	N/A	400	400	400	550	550	550	550	550	550	550	650	650	On Application

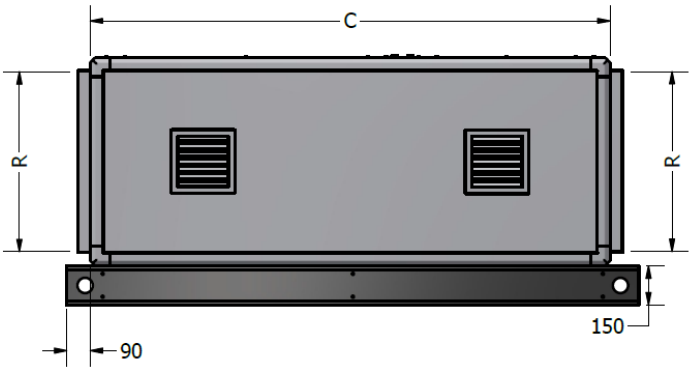
External Dimension Detail

External Horizontal







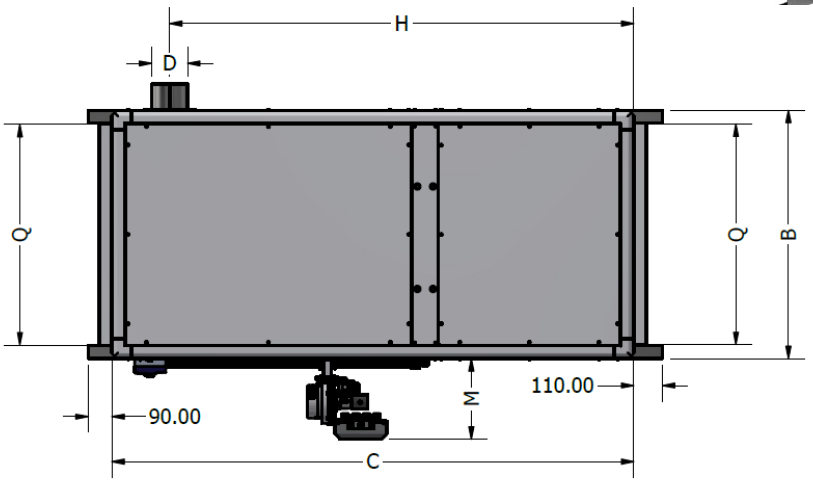


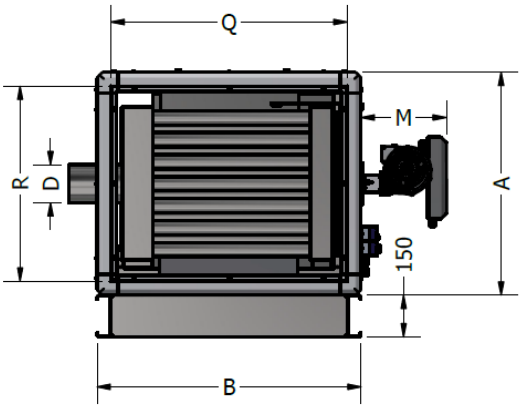
Dimensions (mm)

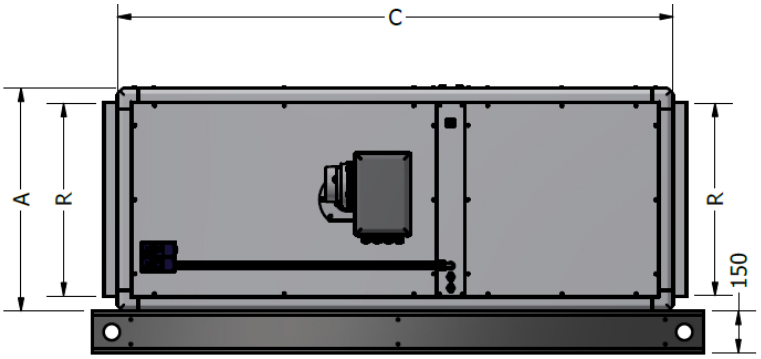
Models	30	45	60	90	120	150	180	210	260	300	350	450	600	700-1000
A - Unit Width	485	800	800	800	800	800	950	950	1100	1100	1100	1500	1500	On Application
B - Unit Depth	848	950	950	950	1200	1200	1400	1520	1520	1520	2200	2400	2400	On Application
C - Unit Height	1038	2000	2000	2000	2000	2000	2250	2250	2250	2250	2250	3350	3350	On Application
D - Flue Diameter	100	130	130	130	130	130	200	250	250	250	250	300	350	On Application
E - Intake Duct	POA	650	650	650	650	650	650	650	650	650	650	900	900	On Application
F - Intake Duct	POA	850	850	850	1100	1100	1300	1300	1420	1420	2100	200	2300	On Application
G - Flue Centre	243	375	375	375	375	375	475	475	575	575	575	750	750	On Application
H - Flue Height	1038	1777	1777	1777	1777	1777	1970	1970	1970	1970	1970	3070	3070	On Application
Q - Duct Outlet	N/A	N/A	850	850	1100	1100	1300	1300	1420	1420	2100	2300	2300	On Application
R - Duct Outlet	N/A	N/A	700	700	700	700	850	850	1000	1000	1000	1400	1400	On Application
S - Condensate Size (if Fitted)	¾"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	On Application
T - Weatherproof Extension	N/A	400	400	400	550	550	550	550	550	550	550	650	650	On Application

External Dimension Detail

Internal
Horizontal







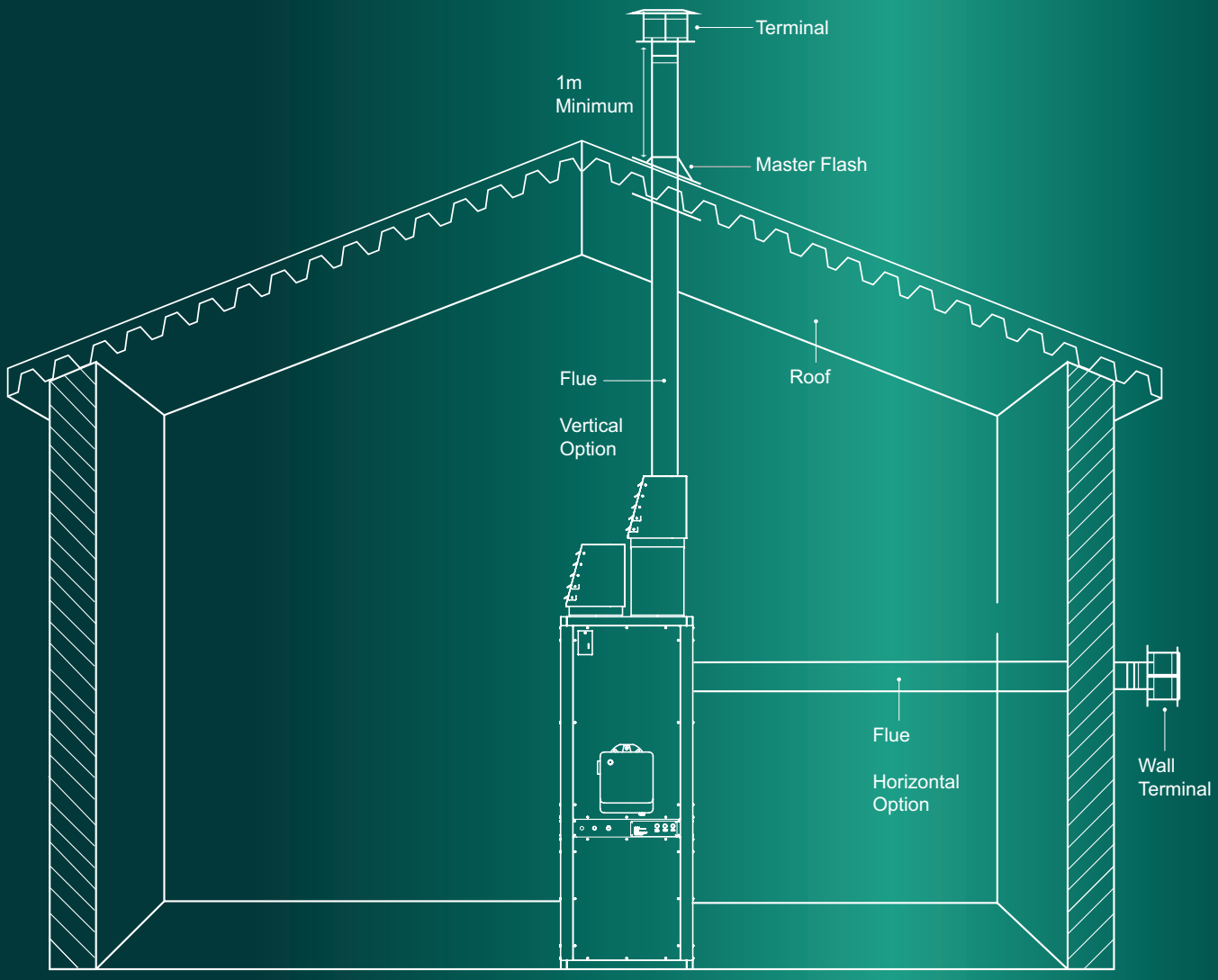
Dimensions (mm)

Models	30	45	60	90	120	150	180	210	260	300	350	450	600	700-1000
A - Unit Width	485	800	800	800	800	800	950	950	1100	1100	1100	1500	1500	On Application
B - Unit Depth	848	950	950	950	1200	1200	1400	1520	1520	1520	2200	2400	2400	On Application
C - Unit Height	1038	2000	2000	2000	2000	2000	2250	2250	2250	2250	2250	3350	3350	On Application
D - Flue Diameter	100	130	130	130	130	130	200	250	250	250	250	300	350	On Application
E - Intake Duct	POA	650	650	650	650	650	650	650	650	650	650	900	900	On Application
F - Intake Duct	POA	850	850	850	1100	1100	1300	1300	1420	1420	2100	200	2300	On Application
G - Flue Centre	243	375	375	375	375	375	475	475	575	575	575	750	750	On Application
H - Flue Height	1038	1777	1777	1777	1777	1777	1970	1970	1970	1970	1970	3070	3070	On Application
K - Burner Centre	253	375	375	375	375	375	375	475	575	575	575	750	750	On Application
L - Burner Height	433	1176	1176	1176	1176	1176	1250	1250	1250	1250	1250	1450	1450	On Application
M - Burner Protrusion	305	230	230	230	230	230	560	560	560	560	563	563	623	On Application
N - Ext Nozzle Height	N/A	798	798	798	798	798	949	949	949	959	949	949	949	On Application
P - Nozzle Height	N/A	409	409	409	409	409	547	547	547	547	547	547	547	On Application
Q - Duct Outlet	N/A	N/A	850	850	1100	1100	1300	1300	1420	1420	2100	2300	2300	On Application
R - Duct Outlet	N/A	N/A	700	700	700	700	850	850	1000	1000	1000	1400	1400	On Application
S Condensate size (if fitted)	¾"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	On Application

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 and industrial sectors, in order to help our clients achieve their desired environmental conditions.

Warmatic are a North East based company established with vast experience gained from within the HVAC and manufacturing industry. Our business operates on two main core values:

- **To build and maintain long-term customer relationships**
- **To fulfil the demands of our clients by producing high quality, efficient products on-time.**

Warmatic are specialists in the design and manufacture of bespoke gas fired warm air:

- **Temperature Controlled Ventilation Units**
- **Gas & Oil Fired Modules**
- **Direct and Indirect Gas Fired Heaters**
- **Air Rotation Units and De-stratification Fans**

Our products are constantly reviewed in order to ensure we poperate at the highest engineering standard whilst also considering our environmental impact.

Our dedicated and talented team use state of the art design technology and offer a high level of technical advice and site support throughout a project to ensure your requirements are achieved.

Warmatic

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