

HADAR

ZEPHR Cabinet Heaters



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Sales Brochure
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Zephr

Gas & Oil Fired Cabinet Heaters

The Zephr range of cabinet heaters, manufactured in the UK, 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.

Heaters are CE and UKCA approved.

Model Range

Range comprises of heaters with heat outputs from 45kW to 600kW. Details of larger output units up to 1MW are available on request.

Gas fired units are suitable for use with natural gas (G20) or LPG (31). Gas type to be specified at time of order.

All Gas fired units are available as either condensing or non condensing versions.

Oil fired units are suitable for use with 35 sec or 28 sec fuels. Oil fired units can also be used with HVO. Oil type to be specified at time of order.

All models are available in vertical or horizontal format, freeblowing or ducted outlet, and as internal or fully weatherproof external units.

Construction

Cabinets are manufactured using sheet metal frame construction, powder coated, to form a durable rigid casework. Panels for the heated section are supplied with an insulated inner skin.

Heat Exchanger

Combustion chamber and four pass heat exchanger both constructed using 304 grade stainless steel. High efficiency flat tube heater exchanger enables efficiencies of up to 94% (ncv) to be achieved on the non-condensing units, and up to 109% on the condensing versions.



Air Distribution

EC plug fans with inverter drive are fitted as standard. EC motor centrifugal fans are available as an option. Heater design allows for even heat distribution across the full heat exchanger surface for enhanced life expectancy.

Free blowing versions are supplied with long throw nozzles with horizontal louvers. Nozzles can be rotated through 360°. Ducted versions are supplied ready for direct connection to ductwork.

Burner

Gas fired versions are supplied with a fully modulating pre-mix burner.

Oil fired versions are supplied with a hi lo burner.

Fire valve and oil filter are supplied as loose components. An additional fire valve may be required in accordance with BS 410: Part2:1978

Controls

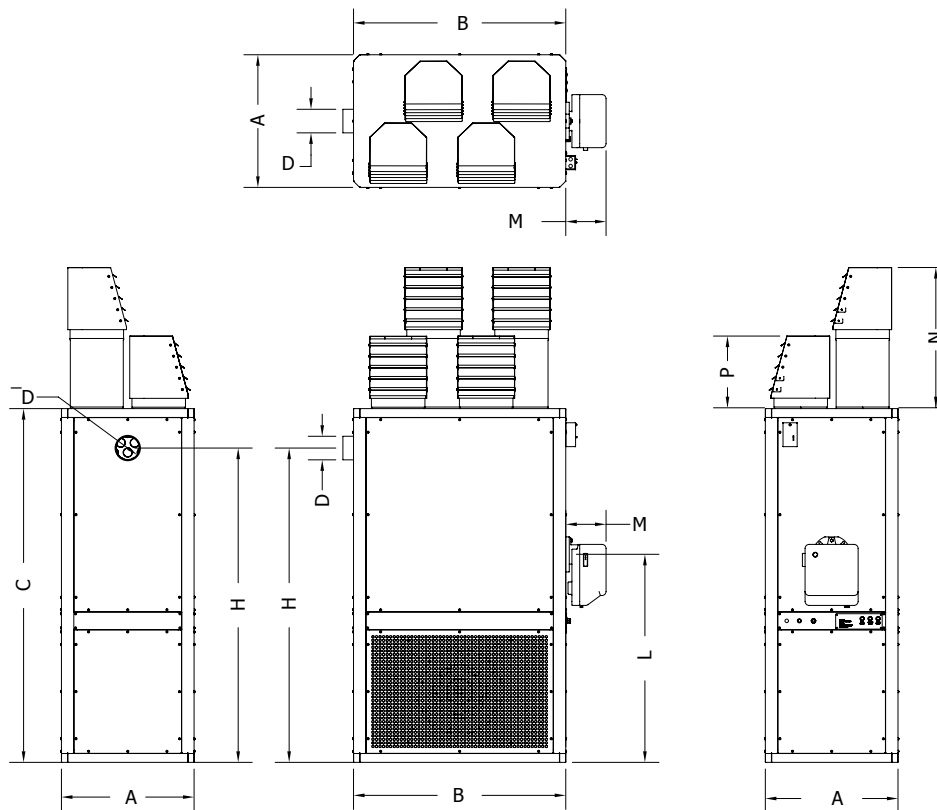
Available either fixed and prewired to the heater or supplied loose for remote fixing. Remote sensor option available. Other control options available.

Technical Data

Model		45	60	90	120	150	180	210	260	300	350	450	600
Nominal heat output	kW	45	60	90	120	150	180	210	260	300	350	450	600
Heat input	kW	48	64	96	128	160	193	225	278	321	374	481	642
Temperature rise	°C	41	41	41	41	41	41	41	39	41	41	41	41
Thermal efficiencies (Nett CV)	%	Min 92%											
NOx Seasonal	mg/kWh	58.2	62.3	65.3	62.1	65.9	61	63.5	65.36	66.2	61	65.2	60.2
Gas Fired													
Gas consumption Nat Gas (G20)	m³/h	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/h	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 Nat 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
Minimum inlet pressure Propane (G31)		37	37	37	37	37	37	37	37	37	37	37	37
Gas connection	Rc	3/4"	3/4"	3/4"	3/4"	3/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Oil Fired													
Oil consumption (35sec)	l/h	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"	1/2"
Air Handling Data													
Airflow	m³/h	3276	4392	6552	8712	10944	13104	15264	19656	21816	25452	32724	43596
Airflow	m³/s	0.91	1.22	1.82	2.42	3.04	3.64	4.24	5.46	6.06	7.07	9.09	12.11
Nozzle throw	m	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
Fan	kW	0.65	0.8	1.2	2.5	2.5	3	3.5	4	7.5	11	11	15
Full load current	A	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	V	415	415	415	415	415	415	415	415	415	415	415	415
Nominal flue diameter	mm	130	130	130	130	130	200	200	250	250	250	300	350
Noise level @ 5m	db(A)	58	62	72	72	75	76	77	78	79	79	76	79
Net weight	kg	338	343	354	385	458	497	543	574	598	986	1430	1512

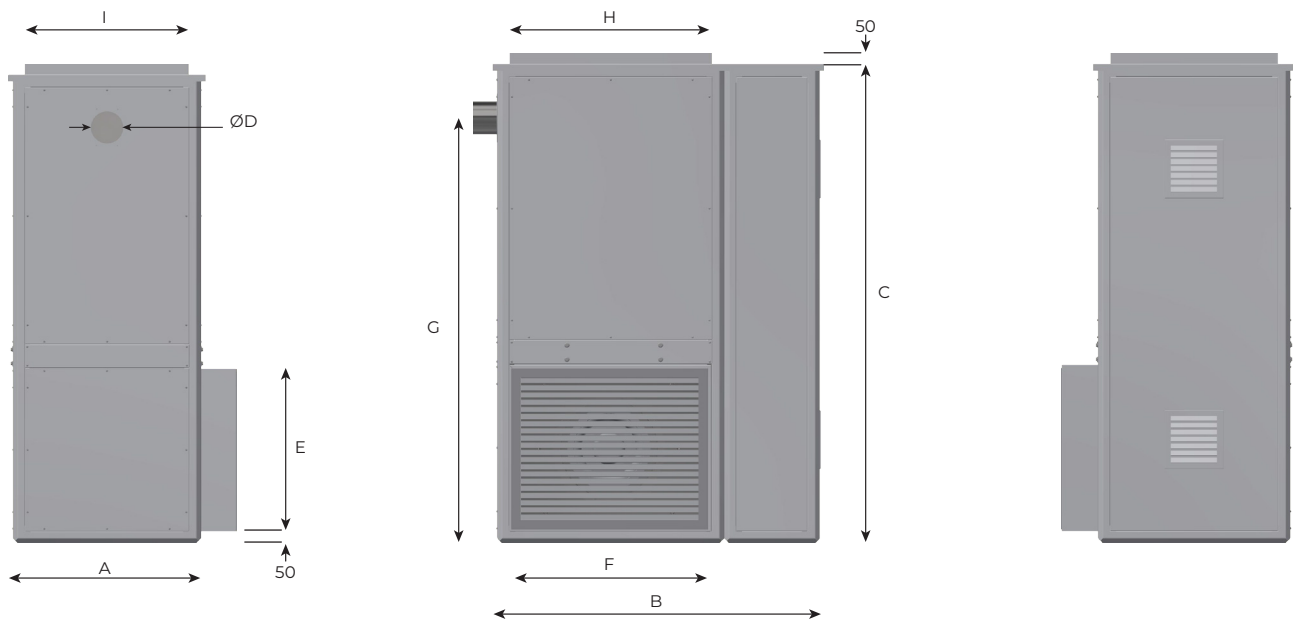


Dimensions Internal Unit



Model	45	60	90	120	150	180	210	260	300
A - Unit Width	750	750	750	750	750	950	950	1150	1150
B - Unit Depth	950	950	950	1200	1200	1400	1400	1600	1600
C - Unit Height	2000	2000	2000	2000	2000	2100	2100	2250	2250
D - Flue Diameter	130	130	130	130	130	200	250	250	250
E - Intake Duct	698	698	698	698	698	1260	1260	1460	1460
F - Intake Duct	810	810	810	1060	1060	1060	1060	1060	1060
G - Flue Centre	375	375	375	375	375	475	475	575	757
H - Flue Height	1777	1777	1777	1777	1777	1872	1872	1970	1970
K - Burner Centre	375	375	375	375	375	475	475	575	575
L - Burner Height	1176	1176	1176	1176	1176	1237	1237	1250	1250
M - Burner Protrusion	230	230	230	230	230	560	560	560	560
N - Ext Nozzle Height	798	798	798	798	798	949	949	949	949
P - Nozzle Height	409	409	409	409	409	547	547	547	547

External Unit



Model	45	60	90	120	150	180	210	260	300
A - Unit Width	800	800	800	800	800	950	950	1100	1100
B - Unit Depth	1350	1350	1350	1750	1750	1900	2050	2050	2050
C - Unit Height	2000	2000	2000	2000	2000	2250	2250	2250	2250
D - Flue Diameter	130	130	130	130	130	200	250	250	250
E - Intake Duct	698	698	698	698	698	1260	1260	1460	1460
F - Intake Duct	810	810	810	1060	1060	1060	1060	1060	1060
G - Flue Connection From Floor	1176	1176	1176	1176	1176	1250	1250	1250	1250
H - Outlet Duct Depth	-	850	850	1100	1100	1300	1300	1420	1420
I - Outlet Duct Width	-	700	700	700	700	700	850	1000	1000

Dimensions for horizontal units available on request

Products In The Hadar Range

Gas Fired Unit Heaters - Cabinet Heaters
Destratification Fans - Electric Unit Heaters
Oil Fired Unit Heaters - Industrial Air Curtains
Commercial Air Curtains - LPHW Unit Heaters
Gas Fired Radiant Tubes - Electric Radiant - Air Rotation
Heat Exchanger Modules - HVLS Fans - Direct Fired Heaters
Gas Fired Air Handling Units



Get In Touch

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