

FREE STANDING GAS & OIL FIRED CABINET HEATERS

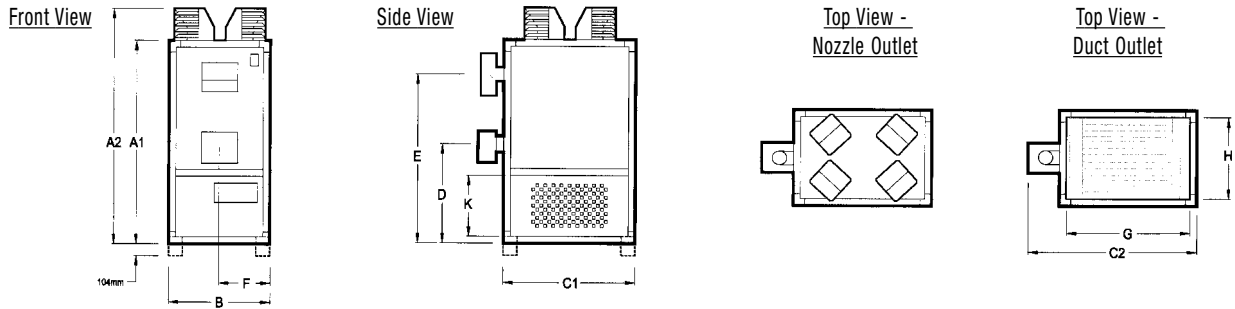


Reznor®

THE NAME FOR WARM AIR

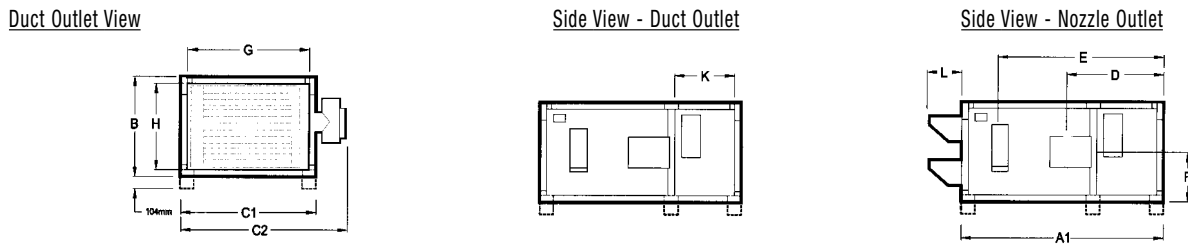
DIMENSIONS

Vertical Cabinet Heaters



MODELS		29-1/44-1	60-1/88-1	117-3/150-3	175-3/205-3	235-3/293-3
		30/40	50/60/75	90/120	140/180	215/230
Cabinet height	A1	1804	1804	2012	2073	2012
Overall height	A2	2088	2168	2376	2477	2466
Overall width	B	865	865	795	1186	1186
Cabinet depth	C1	613	859	1158	1305	1504
Overall depth	C2	908	1207	1547	1915	2114
Bottom to burner centre	D	1007	1019	1041	1184	1112
Bottom to flue centre	E	1441	1465	1637	1750	1678
Side to burner centre	F	433	433	398	593	593
Duct outlet depth/Side duct inlet depth ¹	G	513	759	1058	1205	1404
Duct outlet width/Rear duct inlet width ¹	H	765	765	695	1086	1086
Duct inlet height ¹	K	445	516	600	711	600

Horizontal Cabinet Heaters



MODELS		29-1/44-1	60-1/88-1	117-3/150-3	175-3/205-3	235-3/293-3
		30/40	50/60/75	90/120	140/180	215/230
Cabinet length	A1	1804	1804	2012	2073	2012
Overall height	B	865	865	795	1186	1186
Cabinet depth	C1	613	859	1158	1305	1504
Overall depth	C2	908	1207	1547	1915	2114
Side to burner centre	D	1007	1019	1041	1184	1112
Side to flue centre	E	1441	1465	1637	1750	1678
Bottom to burner centre	F	433	433	398	593	593
Duct outlet depth/Top duct inlet depth ¹	G	513	759	1058	1205	1404
Duct outlet height/Rear duct inlet height ¹	H	765	765	695	1086	1086
Top duct inlet width ¹	K	445	516	600	711	600
Horizontal nozzle outlet length ¹	L	214	305	305	329	359

Note: 1. Nominal dimensions. For specific ductwork connection drawings please consult Reznor.

Reznor[®]

Reznor UK Limited,
Park Farm Road, Park Farm Industrial Estate,
Folkestone, Kent CT19 5DR

Telephone: 01303 259141 Facsimile: 01303 850002
e-mail: sales@reznor.co.uk www.reznor.co.uk

Company Standards and Services:

All Reznor products are tested and approved to CE standards. Reznor UK Ltd. is assessed to BS EN ISO 9001: 2000 Quality Assurance. Reznor offers a design service to its customers; including budget schemes, on site technical support and a comprehensive after-sales service package. Reznor reserves the right to change specifications without prior notice.



© Copyright 2004 Reznor UK FSCH GB EN 1104 3M



An Ambi-Rad Group company

FREE STANDING GAS AND OIL FIRED CABINET HEATERS

Cabinet Heaters

The Reznor range of cabinet heaters combines innovative design techniques and proven heat exchanger technology, to produce units that are cost effective, efficient and aesthetically pleasing.

The range comprises of both standard efficiency and high efficiency models.

Standard Efficiency Cabinet Heaters

10 model sizes cover heat outputs from 31kW to 269kW.

High Efficiency Cabinet Heaters

High efficiency models achieve thermal efficiencies of 92% and are listed on the governments energy technology list. (End users who purchase any products on this list are eligible to claim 100% Enhanced Capital Allowances within the 1st year.)



A range of model sizes cover heat outputs from 30kW to 248kW.

Benefits

- Increased airflows reduce stratification in the roof space (High efficiency models)
- Proven reliability - heat exchanger tubes are expanded into collection boxes, eliminating the possibility of weld failure
- Comfortable temperatures can be maintained in larger areas - all models have effective air throws thereby enabling improved distribution of heat
- Simple installation – units are supplied with an electronic time and temperature control
- High efficiency models are eligible for Enhanced Capital Allowances

Features

- All models are available as either free standing vertical units or alternatively as horizontal units
- Gas or oil fired
- Free blowing or ducted air distribution
- Four pass heat transfer for improved thermal efficiency
- Combustion chamber/heat exchanger assembly is flexibly mounted to allow for thermal expansion
- Double skin pentapost construction incorporating air cooled heat shield
- Factory fitted fire valve and oil filter

Options

- Inlet duct spigots
- Combustion air adaptors
- Stainless steel heat exchangers
- Increased fan duty
- Flat on air filters
- V bank filters
- Four way louvred head
- Constant run fan relay



Specification

Heat Exchanger

The combustion chamber is manufactured from high quality heat resisting stainless steel and has a large surface area and volume to avoid localised hot spots and to ensure long life. A tubular cross flow heat exchanger provides excellent fuel economy and the heat exchanger tubes are expanded into the collection boxes thereby eliminating the possibility of weld failure.

The complete assembly is mounted to allow for expansion to counteract the effect of thermal stress.

Air Handling

Double inlet high efficiency centrifugal fans circulate air across all the heated surfaces to give low surface temperatures and maximise efficiency. Fans on models 29-1 to 88-1 and 30 to 75 are direct driven using a single phase motor. All other models are driven by a heavy duty three phase motor and v-belt system. Air discharge is via nozzle outlets or a four way louvred head. Alternatively units may be installed with a fully ducted distribution system.

Cabinets

The cabinets are constructed using a full pentapost frame and double skinned panels with an inner galvanised steel skin. All panels are easily removed for servicing.

Units are finished in a durable two tone powder paint. Four mounting feet are incorporated into vertical cabinets, to ease on site handling.

After location these feet may be removed or left in position to raise the air inlet away from the floor to minimise ingress of dust. Horizontal cabinets are supplied with six mounting feet for plantroom applications.

Fuel

Heaters are available to operate on either Natural Gas (G20), Propane (G31), 28 or 35 sec oil. See technical data table for full availability.

Gas fired units are fitted with a fully automatic forced draught burner complete with full safety controls and the heaters are tested and approved to the relevant CE standards.

Oil fired models are supplied complete with a fully automatic forced draught pressure jet oil burner complete with safety controls and matched to each heater for optimum flame shape and efficiency.

Controls

A combined fan and limit thermostat is fitted on all heaters which delays fan start until the heat exchanger has reached operating temperature and continues to run the fan after the burner switches off until the remaining heat is dissipated. In the event of overheating the unit would automatically be shut down by the limit thermostat.

On vertical models an electronic time and temperature controller may be either pre-wired to the heater or supplied as a remote panel. Horizontal models are supplied with a separate remote panel.

TECHNICAL SPECIFICATION

Standard Efficiency Vertical and Horizontal Cabinet Heaters

Model FSG/FSO*		29-1	44-1	60-1	88-1	117-3	150-3	175-3	205-3	235-3	293-3		
Nominal output	kW	31	44	62	87	119	149	178	205	233	270		
Gas rate	Natural Gas G20	m ³ /h	3.63	5.45	7.34	10.87	14.52	18.15	21.78	25.41	29.16	33.76	
	Propane G31	kg/h	2.7	N/A	5.4	8.2	10.9	N/A	16.3	N/A			
Minimum inlet pressure	Natural Gas G20	mbar	17.5										
	Propane G31	mbar	25.0	N/A	25.0			N/A	25.0	N/A			
Gas connection size ¹	Rc	1/2"			3/4"				1 1/4"				
Oil consumption	35s Oil	l/h	3.5	5.2	6.9	10.4	13.9	17.4	20.9	24.5	27.9	32.0	
	28s Kerosene	l/h	3.8	5.7	7.6	11.3	N/A						
Oil connection size	Rc	3/8											
Airflow @ 15°C	m ³ /h	2500	2500	5180	5180	7140	8750	10500	12800	14100	17330		
Temperature rise	°K	36	52	34	50	49	50	50	47	49	49		
Approximate throw	m	18	18	21	21	20	25	25	30	25	30		
Number of nozzles		2		3		4							
Available static pressure ²	Pa	95	95	130	130	125	150	200	250	160	250		
Electrical supply		230/240V 1N ~ 50Hz					400/415V 3N ~ 50Hz						
Main fan motor	kW	0.55	0.55	0.74	0.74	1.5	2.2	3.0	4.0	4.0	5.5		
Burner motor	W	70				90			250				
Running current	amps	3.4	3.4	6.6	6.6	2.3	3.7	5.5	8.3	7.0	12.0		
Noise level @ 5 metres ³	dB(A)	52	52	53	53	59	61	61	65	63	67		
Approximate weight ⁴	kg	206	206	245	245	306	318	328	369	409	429		
Flue diameter	ø"	5		6	7				9				
Minimum flue height	m					2							
Maximum recommended mounting height (horizontal units ⁵)	m	3			4			5					

Note: *FSG for Gas fired, FSO for Oil fired. Add suffix D for ducted models. 1. Not supply line size. 2. For alternative airflows or static pressure consult Reznor. 3. Typical factory application. 4. Includes unit and nozzles. 5. Consult Reznor for higher mounting applications.

High Efficiency Vertical and Horizontal Cabinet Heaters

MODEL VCHE/HCHE		30	40	50	60	75	90	120	140	180	215	250	
Nominal output	kW	30	40	52	63	75	89	119	140	178	217	248	
Efficiency on net C.V.	%	92.1	91	92	91.4	91.4	91.3	91.1	91.6	91.8	91.7	92.3	
Gas rate	Natural gas G20	m ³ /h	3.49	4.98	5.94	6.95	8.69	10.36	13.86	16.19	20.55	25	28.51
	Propane G31	Kg/h	2.61	3.73	4.44	5.21	6.51	7.76	10.38	12.12	15.39	18.71	21.34
Minimum inlet pressure													
Natural gas	mbar	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	
Gas connection size ¹	Rc	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1 1/4"	1 1/4"	
Oil consumption 35s Oil	l/h	3.4	4.8	5.7	7.1	8.4	10.0	13.4	15.7	19.9	24.2	27.6	
Oil connection size		3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	
Air flow @ 15°C	m ³ /h	2500	2500	5180	5180	5180	7140	8750	10500	12800	14100	17330	
Temperature rise	°K	36	50	29	36	42	37	40	39	41	45	42	
Approximate throw	m	18	18	21	21	21	21	25	25	30	26	31	
Number of nozzles		2	2	3	3	3	4	4	4	4	4	4	
Available outlet press ducted	Pa	95	95	130	130	130	125	150	200	250	160	250	
Electrical supply		230/240V 1N ~ 50Hz					400/415V 3N ~ 50Hz						
Main fan motor	kW	0.55	0.55	0.74	0.74	0.74	1.5	2.2	3.0	4.0	4.0	5.5	
Burner motor	W	70	70	70	70	70	90	90	90	90	250	250	
Running current	Amps	3.4	3.4	6.6	6.6	6.6	2.3	3.7	5.5	8.3	7	12	
Noise level @ 5 metres ²	dB(A)	52	52	53	53	53	59	61	61	65	63	67	
High air flow option*	m ³ /h	N/A	N/A	N/A	N/A	N/A	8750	N/A	12800	N/A	17330	N/A	
Static pressure with high air flow	Pa	N/A	N/A	N/A	N/A	N/A	150	N/A	95	N/A	250	N/A	
Temperature rise with high air flow	°K	N/A	N/A	N/A	N/A	N/A	30	N/A	32	N/A	37	N/A	
Air flow	m ³ /h	N/A	N/A	N/A	N/A	N/A	7140	N/A	10500	N/A	14100	N/A	
Increased static pressure*	Pa	N/A	N/A	N/A	N/A	N/A	205	N/A	350	N/A	330	N/A	
Temperature rise with increased static pressure	°K	N/A	N/A	N/A	N/A	N/A	37	N/A	39	N/A	45	N/A	
Approximate weight ³	kg	190	190	225	225	225	280	292	300	320	360	380	
Flue diameter	ø"	5	5	6	7	7	7	7	7	9	9	9	
Minimum flue height	m	2	2	2	2	2	2	2	2	2	2	2	
Maximum recommended mounting height (horizontal units ⁴)	m	3	3	5	5	5	6	6	6	6	6	6	

Note: *Increased static pressure is NOT available with high air flow option. FSVEG for Gas fired, FSVEO for oil fired. Add suffix D for ducted models. 1. Not supply line size. 2. Typical factory application. 3. Unit weight including burner. 4. Consult Reznor for higher mounting applications.