

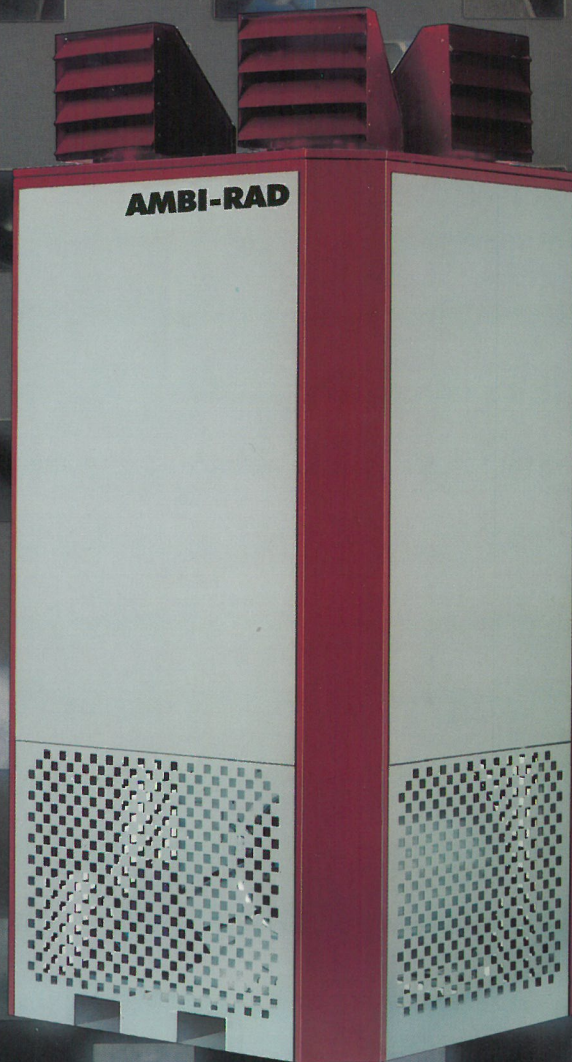
**AMBI-RAD<sup>®</sup>**

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# CENTURION

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## Gas & Oil Fired Cabinet Heaters



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The Ambi-Rad Centurion range of cabinet warm air heaters combine innovative design techniques and proven heat exchanger technology, to produce units that are cost effective, efficient and aesthetically pleasing.

Ten model sizes cover heat outputs from 29kW to 293kW (100,000Btu/h to 1,000,000Btu/h) and are available as freestanding vertical units or alternatively as horizontal or inverted units.

- NATURAL GAS, PROPANE OR OIL FIRED
- LARGE VOLUME COMBUSTION CHAMBER FOR MAXIMUM HEAT TRANSFER
- HEAT EXCHANGER TUBES ARE EXPANDED INTO COLLECTION BOXES, ELIMINATING POSSIBILITY OF WELD FAILURE
- COMBUSTION CHAMBER/HEAT EXCHANGER ASSEMBLY IS FLEXIBLY MOUNTED TO ALLOW FOR THERMAL EXPANSION
- DOUBLE SKIN CONSTRUCTION – AIR COOLED HEAT SHIELD KEEPS OUTER CASING COOL
- TIME SWITCH AND THERMOSTATS ARE PRE-WIRED TO VERTICAL HEATERS TO REDUCE INSTALLATION COSTS
- SIDE PANELS ARE EASILY REMOVED FOR FASTER SERVICING



CENTURION VCH

**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, 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 thermal expansion to counteract the effect of cycling and stress.

**Air Handling**

High capacity centrifugal fans circulate air across all the heated surfaces to give low surface temperatures and maximise efficiency. Air discharge is via nozzle outlets each of which may be rotated to give full control of air distribution. Alternatively units may be installed with a fully ducted distribution system, units for ducted installations are provided with a duct flange on the air outlet.

**Cabinets**

The construction incorporates a double skin section with an air cooled heat shield to prevent heat loss and reduce the temperature of the outer casing. Units are finished in a durable two tone powder paint and lifting points are incorporated into the cabinets to facilitate ease of handling on site.

**Fuel**

Heaters are available to operate on either natural gas (G20), Propane (G31) or 35 sec oil.

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 pressure jet oil burner complete with safety controls to comply with BS799.

**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 be shut down by the limit thermostat.

On vertical models time and temperature controls comprising digital time switch, room thermostat and frost thermostat are pre-wired to the heater to simplify installation. Horizontal and Downflow models are supplied with remote panels, these remote panels may be supplied as an optional alternative on Vertical models.

Model VCH/HCH†			100	150	200	300	400	500	600	700	800	1000
Nominal Output		kW	29	44	60	88	117	150	175	205	235	293
		Btu/h	100000	150000	200000	300000	400000	500000	600000	700000	800000	1000000
Gas rate	Nat. gas G20	m³/h	3.5	5.3	7.1	10.6	14.1	17.6	21.1	24.6	28.2	35.2
	Propane G31	kg/h	2.7	4.1	5.4	8.1	10.8	13.5	16.2	18.2	21.6	27.0
Min. 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
Gas connection size (1)		RC	½	½	½	½	¾	¾	¾	1½	1½	1½
Oil consumption		l/h	3.5	5.2	6.9	10.4	13.8	17.3	20.7	24.2	27.6	34.5
Oil connection size (1)		RC	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾
Air flow @ 15°C		m³/h	1911	2548	3694	5096	7644	10701	12740	13249	13589	17411
Temperature rise		K	50	50	50	50	50	50	50	50	50	50
Approximate throw		m	15	18	18	18	23	23	27	27	29	29
Number of nozzles			2	2	3	3	4	4	4	4	4	4
Available static pressure		Pa	63	63	125	75	150	175	200	200	125	150
Electrical supply			230v/1N~/50hz					400/415v/3N~/50hz				
Main fan motor		Kw	0.63	0.63	1.1	1.3	1.5	2.5	3.0	3.0	4.0	5.5
Burner motor		watts	70	70	70	70	90	90	90	250	250	250
Running current		Amps	2.5	2.5	6	7.2	3.9	4.9	7.6	8.2	8.5	9
Noise level @ 3 metres (2)		dB (A)	64	64	70	70	72	76	78	78	78	80
Approximate weight		kg	230	230	279	283	398	410	480	501	690	710
Flue diameter		mm	125	125	150	175	175	175	175	225	225	225
Minimum flue height		m	3	3	3	3	3	3	3	3	3	3

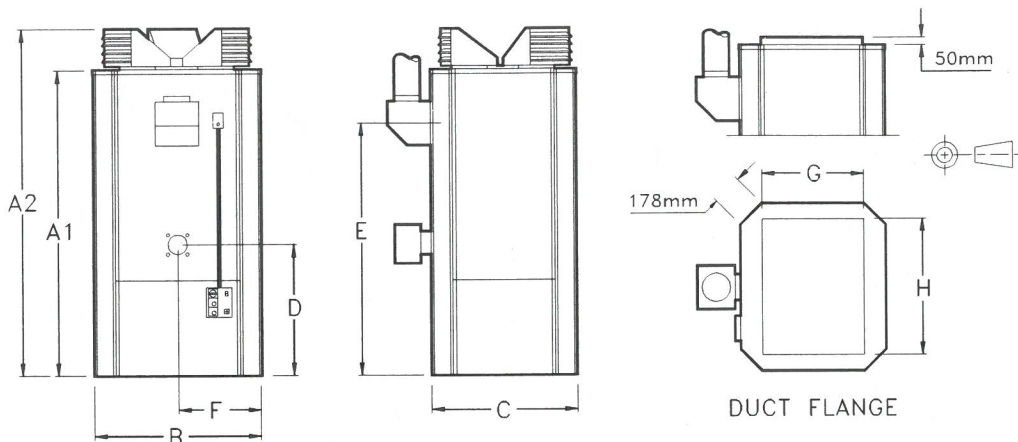
† Note: VCH for vertical. HCH for horizontal cabinet heaters.

Add suffix "N" for nat. gas, "O" for oil fired and "D" for ducted outlet.

(1) Not supply line size. (2) Typical factory application.

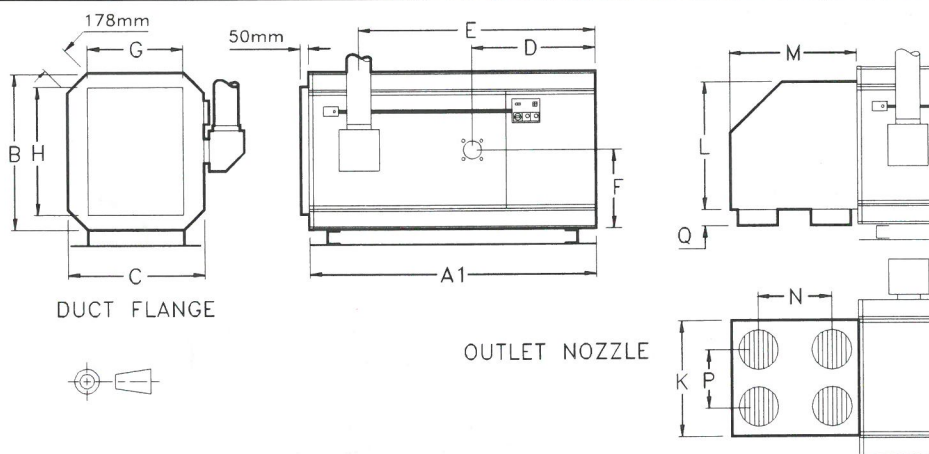
# DIMENSIONAL DATA

## CENTURION VCH



MODEL VCH		100/150	200/300	400/500	600/700	800/1000
Cabinet height	A1	1800	1800	2000	2000	2000
Cabinet height	A2	2020	2020	2305	2355	2355
Cabinet width	B	895	985	985	1186	1186
Cabinet depth	C	615	855	1156	1300	1506
Bottom to burner centre	D	984	1018	1155	1132	1132
Bottom to flue centre	E	1418	1464	1751	1698	1698
Side to burner centre	F	448	493	493	593	593
Duct outlet depth	G	500	600	750	835	950
Duct outlet width	H	600	800	900	1000	1250

## CENTURION HCH



MODEL HCH		100/150	200/300	400/500	600/700	800/1000
Cabinet length	A1	1800	1800	2000	2000	2000
Cabinet height	B	895	985	985	1186	1186
Cabinet depth	C	615	855	1156	1300	1506
Side burner to centre	D	984	1018	1155	1132	1132
Side to flue centre	E	1418	1464	1751	1698	1698
Bottom to burner centre	F	448	493	493	593	593
Duct outlet width	G	500	600	750	835	950
Duct outlet height	H	600	800	900	1000	1250
Nozzle plenum width	K	500	600	750	835	950
Nozzle plenum height	L	640	840	940	1040	1290
Nozzle plenum depth	M	600	800	900	1000	1250
Nozzle centres depth	N	250	450	550	520	750
Nozzle centres width	P	N/A	N/A	400	355	470
Nozzle depth	Q	100	100	100	100	100

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Due to continuous product innovation, AMBI-RAD reserves the right to change product specification without due notice.

**AMBI-RAD**  
Energy Efficient Heating Systems



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