

External Variante

 **BENSON
HEATING**



External/Rooftop Gas Unit
Heaters

EVRC Centrifugal Fan

EVRD Duct Module

External Variante

Introduction

The compact highly efficient Benson external Variante heaters provide cost effective heating for most commercial and industrial buildings.

EVRC/D units are weatherproof units suitable for rooftop or other outdoor locations.

Options

- High/Low gas burner
- 0 - 10v burner modulation
- Mixing box complete with dampers
- Stainless steel heat exchanger
- Air re-circulation thermostat
- Fresh air intake louvre

Model Range

The external Variante gas fired units are available with heat outputs ranging from 12kW-144kW for use on natural gas (G20), units may also be specified for use on propane (G31).

EVRC Heaters are supplied with a centrifugal fan and outlet duct connection spigot. Optional fan drives can be specified for updated pressures of 200 and 500 pascals.

EVRD units are a heat exchanger module without fan for installation where air movement fans are provided by others.

Testing, Approvals and Certification

Benson Heating is accredited with ISO 9001 quality assurance certification. All gas fired heaters have been type tested and approved to CE standards by an independent notified body. Each heater is tested and fired prior to despatch.

ECA



This symbol verifies that the product has been independently assessed and currently qualifies for the ECA scheme, an up-front tax relief enabling businesses that invest in energy-saving equipment to claim 100% first-year capital allowances against their taxable profits.





Specification

Cabinet

Formed from electro-zinc plated steel the heater cabinet is IP44 rated epoxy powder coated with a durable Kestrel Grey paint finish.

Access to the burner and controls compartment is via a full width side hinged door.

The units are complete with a sloped roof section with rain channels and are lined with a high specification closed cell insulation. Units are supplied mounted on a base frame.

Heat Exchanger

Formed from aluminised steel tube into a compact, highly efficient four pass assembly the Variante heat exchanger is capable of delivering efficiencies in excess of 91% nett.

All heater efficiencies meet the current criteria necessary for inclusion into the Enhanced Capital Allowance (ECA) scheme.

Stainless steel heat exchanger tubes are available as an option and is recommended for applications using fresh air.

Burner

Variante heaters are fitted with a quiet multi-flame, in-shot burner complete with automatic electronic spark ignition and ionisation flame proving. On/off control is standard, optional high/low or modulation can be specified where required.

Electric Motors

All electric motors comply with EC motor directive 2005/32/EC.

Fuel

Heaters can be specified to operate on either natural gas (G20) or LPG (Propane G31).

Flue

Variante heaters are factory fitted with a power flue venter complete with flue outlet terminal. The flue fan is safely interlocked with the burner control system via a pressure differential sensor.

TECHNICAL DATA

New Model Ref		12	20	30	42	50	60	72	95	120	145
Old Model Ref		40	70	100	135	170	200	250	330	410	490
ECA Approved*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nominal heat output	kW	12	20	29	39	49	59	72	96	120	144
Temperature rise	°C	32	30	31	36	34	32	32	35	32	32
Airflow											
EVRC	m ³ /h	1116	1980	2844	3456	4356	5544	6840	8136	11088	13608
EVRD (minimum)	m ³ /h	900	1512	2160	2916	3672	4428	5400	7200	9000	10800
EVRD (maximum)	m ³ /h	1800	2988	4356	5868	7344	8856	10800	14400	18000	21600
Static Pressure											
EVRC	Pa	100	125	100	150	150	180	150	180	200	200
EVRC-250	Pa	250	250	250	250	250	250	250	250	250	250
EVRC-500	Pa	500	500	500	500	500	500	500	500	500	500
Gas Consumption¹											
Natural gas G20	m ³ /h	1.37	2.23	3.38	4.50	5.63	6.76	8.33	11.12	13.87	16.63
Propane G31	m ³ /h	0.52	0.86	1.30	1.73	2.16	2.59	3.21	4.28	5.34	6.41
Gas connection ²	Rc	½"	½"	½"	½"	½"	½"	¾"	¾"	¾"	¾"
Minimum Gas Inlet Pressure											
Natural gas G20	mbar	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Propane G31	mbar	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Electric Supply											
EVRC & EVRC-250	V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	415/3/50	415/3/50
EVRC-500	V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50	415/3/50
EVRD	V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Flue diameter	mmØ	80	80	100	100	100	100	130	130	130	130
Combustion air diameter	mmØ	80	80	100	100	100	100	130	130	130	130
Noise level ³	dB(A)	48	50	52	53	55	39	55	58	60	60
Nett weight											
EVRC	kg	140	146	163	181	202	227	294	324	370	414
EVRD	kg	76	80	93	107	121	135	184	204	243	276

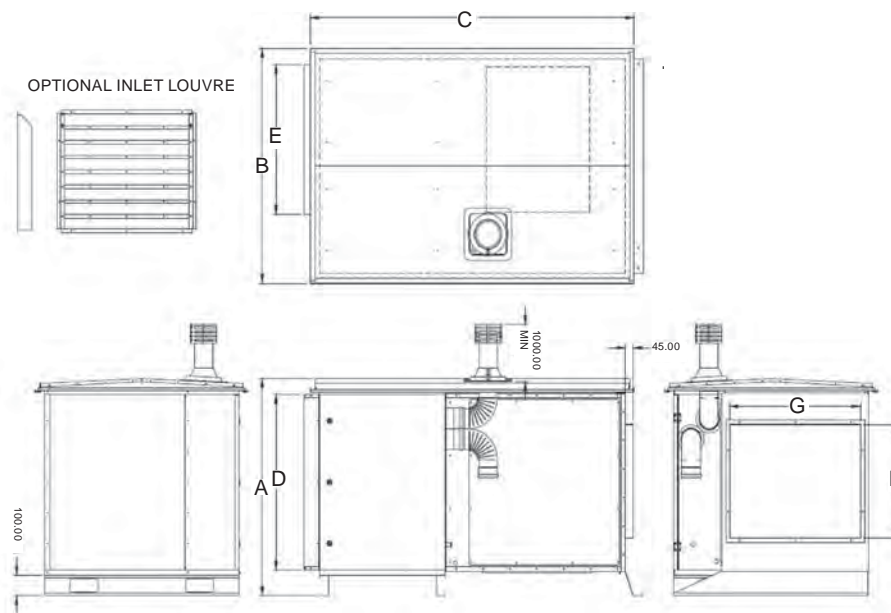
1 Fuel consumption and output figures based upon gross calorific values as -
 Natural gas (G20) @ 37.78 MJ/m³
 Lpg propane (G31) @ 95.65 MJ/m³

2 Gas lines must be adequately sized and reduced at appliance as required

3 Noise levels measured 3m from appliance for standard EVRC model. For EVRC 250/500 models please consult Benson.

*Please check ETL at time of ordering for latest listings as criteria are subject to change.

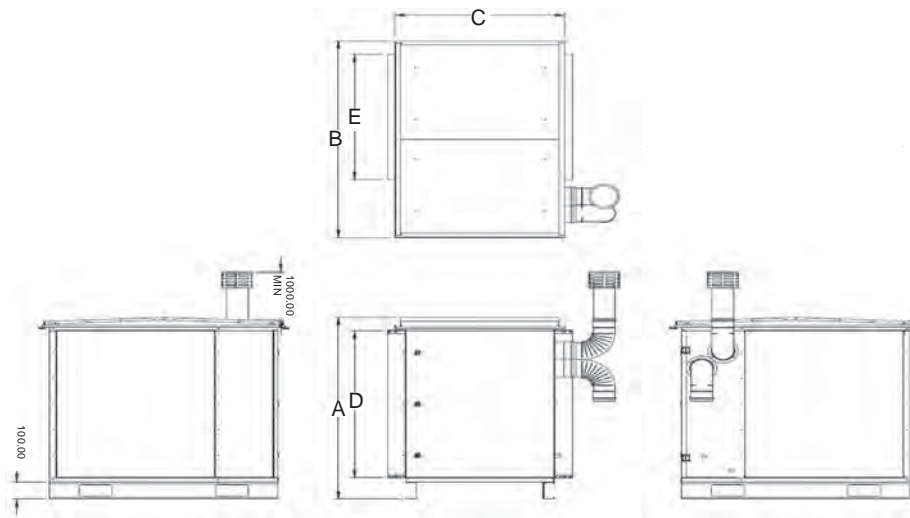
EVRC



DIMENSIONS

New Model Ref			12	20	30	42	50	60	72	95	120	145
Old Model Ref			40	70	100	135	170	200	250	330	410	490
A	All	mm	595	595	700	805	935	1065	805	955	1135	1305
B	All	mm	1150	1150	1150	1150	1150	1150	1850	1850	1850	1850
C	All	mm	1575	1575	1575	1575	1750	1750	1805	1875	1875	1875
D	All	mm	390	390	495	600	730	860	600	750	930	1100
E	All	mm	729	729	729	729	729	729	1339	1339	1339	1339
F	All	mm	276	276	381	486	558	558	668	668	748	828
G	All	mm	708	708	708	708	708	708	1318	1318	1318	1318

EVRD



DIMENSIONS

New Model Ref			12	20	30	42	50	60	72	95	120	145
Old Model Ref			40	70	100	135	170	200	250	330	410	490
A	All	mm	595	595	700	805	935	1065	805	955	1135	1305
B	All	mm	1150	1150	1150	1150	1150	1150	1850	1850	1850	1850
C	All	mm	780	780	780	780	780	780	910	910	910	910
D	All	mm	390	390	495	600	730	860	600	750	930	1100
E	All	mm	729	729	729	729	729	729	1339	1339	1339	1339

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Benson Heating, Ludlow Road
Knighton, Powys, LD7 1LP
United Kingdom

Telephone 01547 528534
Facsimile 01547 520399
E-mail sales@bensonheating.co.uk
Website www.bensonheating.co.uk

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