



# BENSON

## Variante<sup>3</sup>

Gas Fired Axial Fan Unit Heaters



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# Variant<sup>3</sup>

## Gas Fired Axial Fan Unit Heaters

The new Variante<sup>3</sup> builds on the technical excellence of the previous range to provide cost effective and robust heating for industrial and commercial buildings.

Using wall or roof mountings, the heaters are available for either room sealed or conventional power flue applications.

### Model Range

VRA gas fired units are available with twelve heat outputs for use on natural gas (G20) as standard, but alternatively can be specified for use on propane (G31).

VRA heaters are fitted with high efficiency axial fans and discharge warm air through an outlet grille complete with adjustable horizontal louvers.

### Options

- > High/Low or modulating control via a SmartCom MZ
- > Stainless steel heat exchanger

### Applications

- > Automotive workshops
- > Factories
- > Retail outlets
- > Sports arenas and halls
- > Warehouses
- > Workshops

## Specification

### Cabinet

Formed from electro-zinc plated sheet steel and painted epoxy pebble grey (RAL 7032) to give a robust and durable finish. Louvres painted yellow olive (RAL 6014).

### Heat Exchanger

Tubular four-pass serpentine arrangement manufactured as standard from aluminised steel with stainless steel option.

### Burner

In-shot burner type with automatic spark ignition and full safety flame proving. On/Off control is supplied as standard with High/Low and modulating control optional.

### Power Venter Flue Fan

Variant<sup>3</sup> are fitted with a powerful venter fan that enables exhaust & combustion air to be run up to a maximum of 9m each.

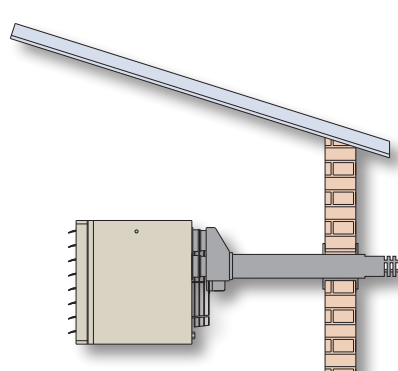




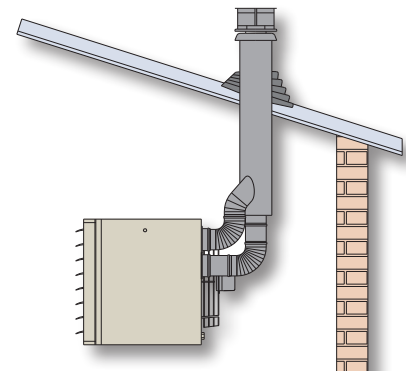
### Versatile Flue Installation

The balanced flue terminal provides both the combustion air inlet and flue outlet from a single building penetration. The terminals are ordered separately from the heaters to suit either a wall outlet or roof outlet. Additional flue and combustion air pipes may be added, up to a maximum of nine metres of flue pipe, plus nine metres of combustion air pipe. (This reduces by 1.5 metres for every 90° bend fitted).

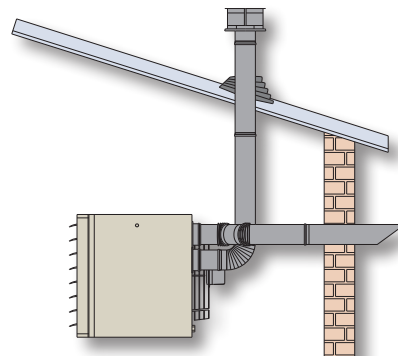
To comply with CE approvals, balanced flue appliances must be used with the manufacturer's balanced flue system. The units are also certified for fan assisted flue installations, where the combustion air is to be drawn from within the heated space; an alternative wall or roof terminal is required for this application.



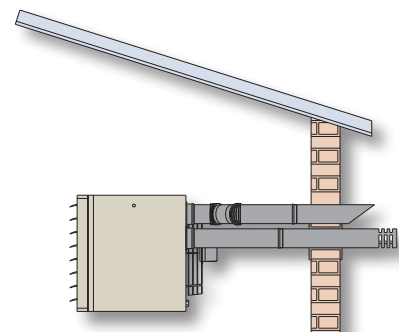
Balanced flue wall outlet (type C12) eliminates expensive roof opening and flashing



Balanced flue roof outlet (type C32)



Combustion air through wall, flue outlet through the roof (C52)



Separate combustion air and flue pipes (type C12) for applications where wall thickness exceeds maximum length shown in flue dimension table

### Installation

Units may be suspended or alternatively mounted on a suitable non-combustible support. Four integral suspension points complete with an M10 female thread are provided to each heater.

A single phase electrical supply is required to each unit. This supply should not be switched off except for maintenance.

Units must not be installed in atmospheres containing flammable or explosive vapours, combustible dust, halogenated hydrocarbons or chlorinated vapours. They are also unsuitable for areas where contaminants may affect electrical motors or connections.

Heater positions and flue arrangements are indicative. For heater and flue clearances please refer to our sales leaflets.

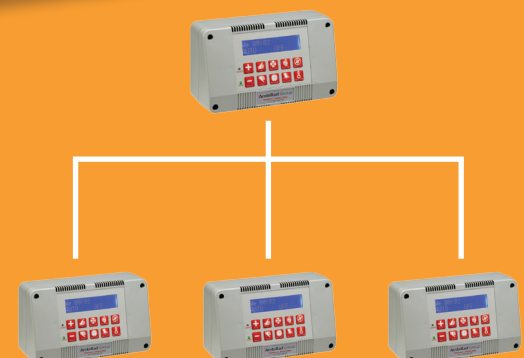


## Optimised Control

To complement the Variante units a versatile range of SmartCom control panels are available

- > Self adapting optimum start and stop
- > Simple user friendly programming
- > Individual seven day programming
- > Day, night and frost (5°C) temperature settings
- > Three on/off periods per day

- > Easy set overtime and holiday periods
- > Remote burner reset facility
- > Password protection to prevent unauthorised adjustment
- > Hours run and service data logging
- > Battery back up in the event of mains failure
- > High / low or modulating burner control (SmartCom MZ required)

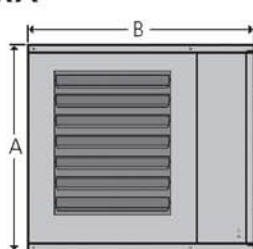


Optional SmartCom MZ panel allows up to 16 panels to be linked for centralised control

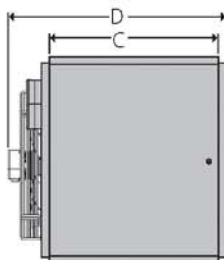
## Technical Data

		Model Ref											
		12	20	30	35	42	45	50	60	75	100	120	145
Model series		3	3	3	3	2	3	2	3	3	3	3	3
Nominal heat output	kW	11.1	21.8	26.0	36.2	39.0	44.6	49.0	60.9	73.1	94.5	119.3	137.4
Airflow	m <sup>3</sup> /h	1122	2045	2326	3170	3456	4270	4356	5214	7282	8024	10764	11400
Temperature rise	K	29	31	33	33	34	31	33	34	29	34	32	35
Throw	m	9.5	13.0	17.0	24.0	20.0	25.0	23.0	30.0	32.0	31.0	38.0	39.0
<b>Gas Consumption</b>													
Natural gas G20	m <sup>3</sup> /h	1.27	2.52	3.02	4.19	4.50	5.19	5.63	6.98	8.38	11.19	13.80	15.77
Propane G31	kg/h	TBC	1.86	2.22	3.09	3.20	3.82	4.00	5.15	6.17	8.24	10.17	11.62
Gas connection	Rc	½"	½"	½"	½"	½"	½"	½"	½"	¾"	¾"	¾"	¾"
<b>Electrics</b>													
Supply													
VRA	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	230/1/50	230/1/50
FLC													
VRA	amps	2.3	1.6	2.3	3.1	1.2	3.1	1.6	5.4	5.4	4.3	3.1	3.1
<b>Mounting height(s)</b>													
VRA	m	2.5	3.0	4.0	4.0	2.0-3.2	4.0	2.4-4.0	5.0	5.0	5.0	6.0	6.0
Flue diameter nom	mmø	80	100	100	130	100	130	100	130	130	130	130	130
Combustion air diameter nom	mmø	80	100	100	130	100	130	100	130	130	130	130	130
Maximum horizontal run	m	9	9	9	9	6	9	6	9	9	9	9	9
Maximum vertical run	m	9	9	9	9	10	9	10	9	9	9	9	9
Noise level (approx @ 3m)	dB(A)	37	43	48	49	58	49	61	55	56	54	55	56
Net weight	kg	90	90	95	126	104	131	120	148	160	229	242	279

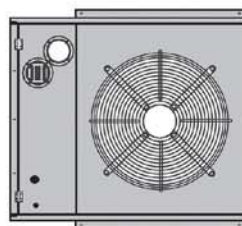
## VRA



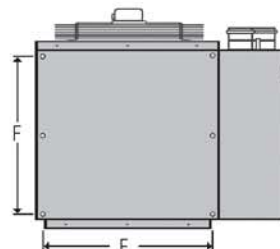
Front view



Side view



Back view



Plan view

## Dimensions

		Model Ref											
		12	20	30	35	42	45	50	60	75	100	120	145
Unit height	A	567	567	567	845	650	845	910	845	845	845	960	1150
Unit width	B	965	965	965	965	1050	965	1050	1298	1298	1298	1750	1750
Unit depth	C	652	652	652	652	680	652	680	652	652	807	810	810
Overall depth	D	782	785	821	824	893	824	893	824	824	1022	1022	1022
Suspension points	E	611	611	611	611	755	611	755	942	942	942	1365	1365
Suspension points	F	406	406	406	406	640	406	640	406	406	550	770	770
Top clearance		150	150	150	150	150	150	150	150	150	150	150	150
Rear clearance		450	450	450	450	450	450	450	450	450	450	450	450
Bottom clearance		150	150	150	150	150	150	150	150	150	150	150	150
Left-hand side clearance		150	150	150	150	150	150	150	150	150	150	150	150
Right-hand side clearance		800	800	800	800	800	800	800	800	800	800	800	800

Throw figures provide the distance to the point where average air velocity is 0.25 m/s.

Fuel consumption and output figures based upon gross calorific values as - Natural gas (G20) @ 37.78 MJ/m<sup>3</sup> & Lpg propane (G31) @ 95.65 MJ/m<sup>3</sup>

Flue and combustion air maximum runs for guidance purposes only. Please refer to installation instructions for detailed information.

Maximum mounting heights may exceed the figure recommended where de-stratification fans are used (see Benson DS range)

Noise levels at 5m available upon request.



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