POWRMATIC®

Delivering complete climate control solutions worldwide

Our most compact power vented gas fired cabinet heater combining form, function and ErP compliance.
The all new VPx.

VPx

Power Vented Gas Cabinet Heater

Natural Gas & LPG Fired Options

www.powrmatic.co.uk

VPx Power Vented Gas Cabin

ErP Compliance

As from September 2018 the scope of the current Ecodesign regulation (EU) 2015/1188, Directive 2009/125/EC - Lot 21 Tier 1 (ErP) regulation is widened to embrace maximum levels of Nitrous Oxide (NOx) emissions.

All warm air heaters used to provide comfort for the occupants of a heated space must emit NOx levels less than 100 mg/kWh.

Compliance to the standard remains mandatory.

Product Benefits

- REDUCED NOx TECHNOLOGY
- COMPACT DESIGN
- VERTICAL OR HORIZONTAL FLUE OPTIONS
- UPTO 140kW OUTPUT NOW AVAILABLE
- FAN ASSISTED ROOM SEALED
- FACTORY FITTED CONTROLS

Compact Efficient Compliant

The all new VPx From Powrmatic

The new look ErP compliant power vented VPx cabinet heater range has been redeveloped with a more compact, robust and proven design with high/low burners as standard.

With the range now increased to six, with a new maximum output of 140kW, VPx heaters can be configured for either room sealed or flue only operation. Vertical and horizontal fluing options add benefit and savings for installers.

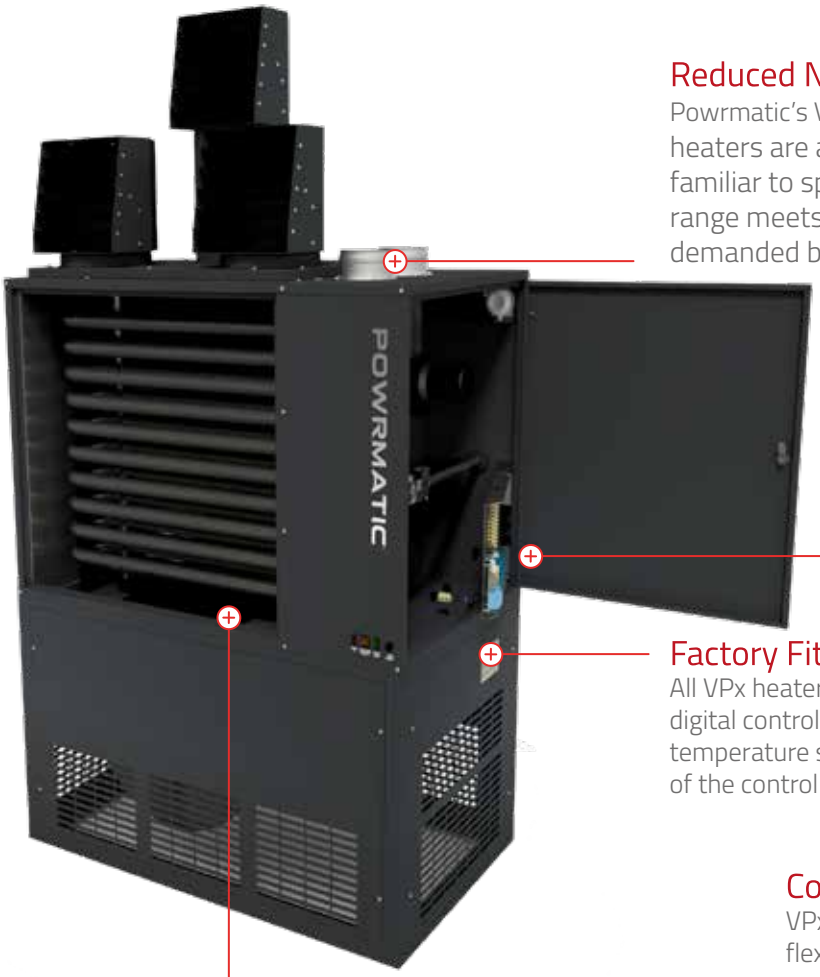
The VPx is designed to offer ErP complaint NOx emissions and seasonal efficiencies providing cost effective solutions for a wide variety of industrial and commercial buildings.

Models Available

- VPx UF - Upright Free Blowing Unit
- VPx UD - Upright Ducted Unit

WAREHOUSES ▪ FACTORIES ▪ GARAGE WORKSHOPS ▪ DISTRIBUTION / LOGISTIC CENTRES ▪

Product Features



Reduced NOx Emissions

Powrmatic's VPx range of gas fired floor standing cabinet type heaters are a development of the highly successful VPC range familiar to specifiers, installers and end users alike. The new range meets the NOx emission and seasonal efficiency levels demanded by the latest ErP regulations.

Easy Access Control Panel

The VPx has been designed with engineers in mind. The hinged electrical panel provides easy access to the burner compartment for routine servicing and maintenance whilst on-site wiring connections have been optimised to speed up installation.

Factory Fitted and Pre-Wired Controls

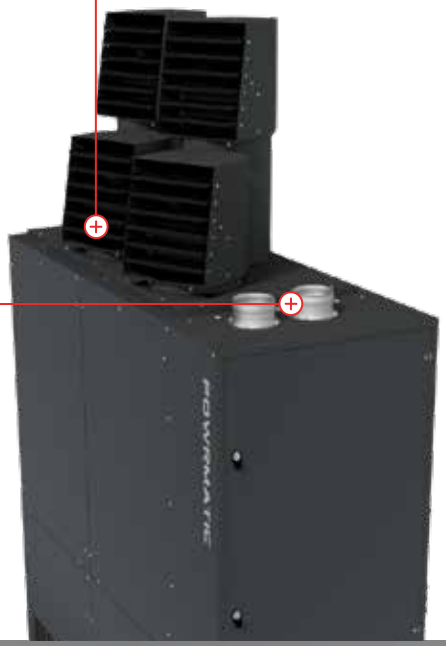
All VPx heaters are provided with Powrmatic's MC200 integrated digital control. The optimised start, programmable time and temperature setting options and password protection functionality of the control combine to offer efficient utilisation of the fuel.

Compact Construction

VPx dimensions have been reduced providing greater flexibility in choice of applications and locations. The construction is of the familiar frame and panel construction with the lower panels designed to accept a choice of inlet options including fresh and return air spigots, dampers and filters.

Extended Range & Heat Exchanger Options

The new VPx range has been extended to six models with a maximum output of 140 kW. In additon, the robust and proven four pass tubular heat exchanger is manufactured as standard from aluminised steel formed, swaged and expanded without the use of stress inducing welding. For harsher environments 409 and 316 grade stainless steel options are available.



Approvals

VPx heaters are type tested and CE approved. In addition VPx heaters made available to the market from September 2018 onwards comply with the requirements of the Directive 2009/125/EC - Lot 21 Tier 1.

CE

Horizontal Discharge Option

Depending on application and heater location, the VPx can be specified with horizontal low level flue discharge discharge, this can help to minimise costly roof penetrations. A vertical flue option can also be specified.

Technical Specification

VPx

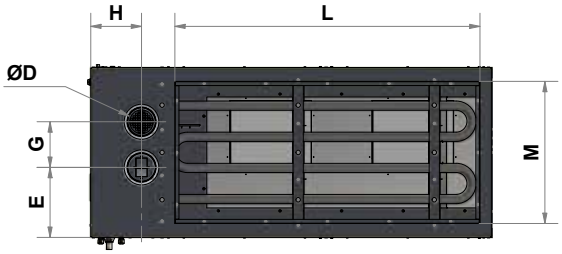
Model				35	50	70	90	120	140
Output (nominal)	High Fire (max)		kW	34.0	50.5	70.0	90.0	118.5	137.0
	Low Fire (min)		kW	23.8	33.9	46.7	65.3	83.5	93.3
Input (nett CV)	High Fire (max)		kW	36.5	54.5	74.0	97.5	127.0	146.0
	Low Fire (min)		kW	26.08	37.41	51.67	71.65	90.83	101.16
NOx Seasonal (Gross)			mg/kWh	<96.0	<96.0	<96.0	<96.0	<96.0	<96.0
Seasonal Space Heating Energy Efficiency			% hs,h	74%	72.8%	72.1%	72.1%	73.7%	73.7%
Air Flow Volume			m^3/s	1.11	1.51	1.94	2.81	3.56	3.75
Airflow	Heads		No.	3			4		
	Throw		m	12	22	25	27	30	32
	Fan Static	Standard	Pa	200	250	250	180	290	250
		Uprated	Pa	400	400	400	400	400	400
Electrics	Supply	Standard	V/ph/Hz	230/1/50					
		Optional*	V/ph/Hz	N/A		400/3/50			
	Start Current		amp	15.6	26.3	38(18)	34(14)	34(14)	46(29)
	Run Current		amp	4.7	7.6	11(5.3)	9.8(4.18)	9.8(4.18)	13.1(8.43)
Fuel	Connection		BSP/Rc	¾"					
	Nominal Inlet Pressure	Nat Gas	mbar	20.0					
		LPG	mbar	37.0					
	Consumption	Nat Gas	m^3/h	3.86	5.77	7.83	10.32	13.44	15.45
		LPG	m^3/h	1.52	2.20	3.16	4.01	5.10	5.90
Overall Dimensions	VPx UF	Height	mm	2184	2286	2381	2607	2607	2722
		Width	mm	819	819	819	819	819	819
		Depth	mm	1325	1325	1325	1950	1950	1950
Installation Clearance	VPx UF	Front	mm	1000					
		Side	mm	150 (wall facing side)					
		Side	mm	500					
		Rear	mm	500					
		Above	mm	1000					
Flue	Diameter		mm Ø	100	100	130	130	130	130
	Maximum Length	Flue Only	m	12					
		Room Sealed	m	6					
Combustion Air Spigot			mm Ø	100		130			
Noise Levels	VPx UF		dB(A)	60	62	63	68	69	70
Nett Weight	VPx UF		kg	180	209	287	426	468	542
Model				**35**	**50**	**70**	**90**	**120**	**140**

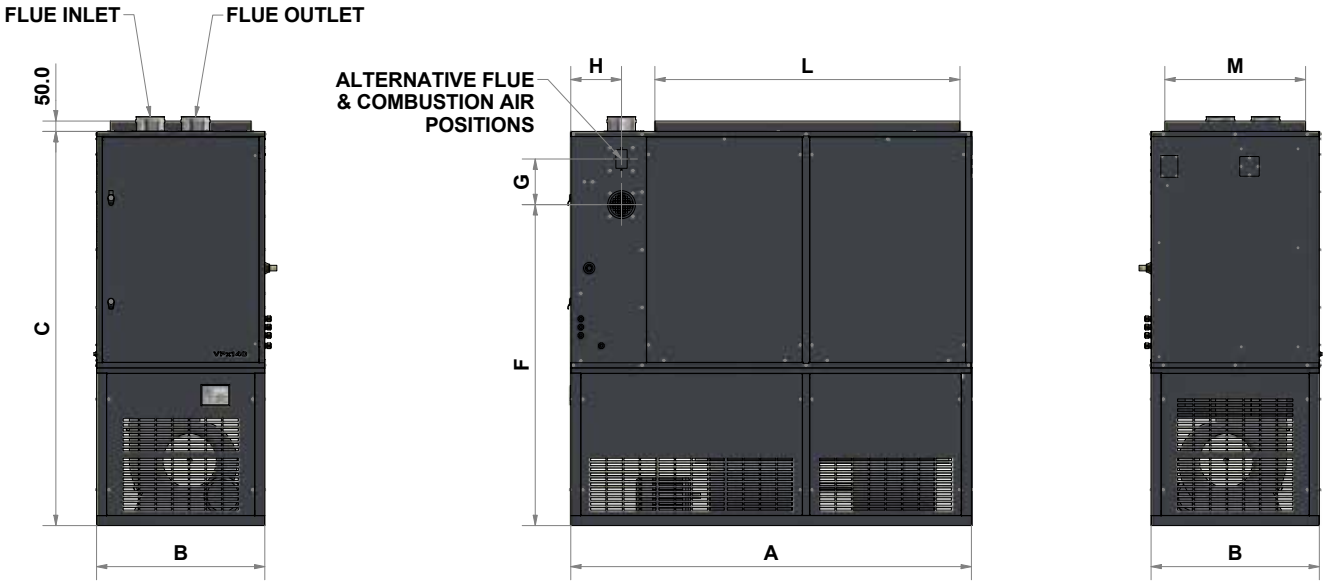
Notes:

- Fuel Consumption and input figures based upon nett calorific values as follows: - Natural Gas (G20) nett CV 34.02 MJ/m3 - Propane (G31) nett CV 88.00 MJ/m3
- Heaters have efficiency levels which meet with the minimum heater efficiency requirements of UK Part L Building Regulations.
- VPx heaters comply with the seasonal efficiency and NOx limits requirements of the Ecodesign regulation (EU) 2015/1188, Directive 2009/125/EC – Lot 21 Tier 1
- Standard heaters configured as High/Low. Optional modulation available.
- Air handling data is assessed at room ambient conditions
- Throw figures provide the distance to the point where the terminal velocity degrades to 0.25m/s
- Noise levels are applicable to standard VPxUF models and are measured 5m from appliance in a free field.
- Motor kW, run and start amps apply to standard electrical supply as stated. For optional data contact sales office.
- Side panels are interchangable to ease with installation against walls.
- Optional 3 phase direct drive fans shown in italics within brackets().
- Connection of combustion air duct is not required for 'flue only' applications.
- It is the responsibility of the installing contractor to ensure that ductwork is correctly sized and balanced when installing VPx units.

Dimensions

VPx 35-140 UF /UD



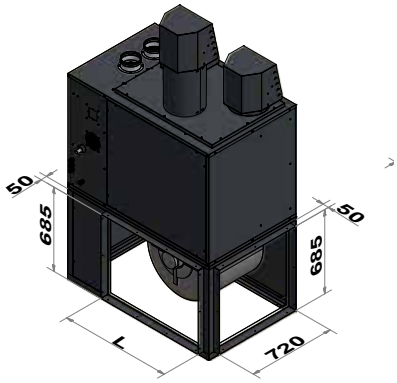


Model		35	50	70	90	120	140
A	mm	1325	1325	1325	1950	1950	1950
B	mm	819	819	819	819	819	819
C	mm	1672	1672	1672	1900	1900	1900
DØ	mm	100	100	130	130	130	130
E	mm	356	356	356	337	337	337
F	mm	1314	1314	1236	1547	1547	1547
G	mm	142	142	220	220	220	220
H	mm	237	237	237	247	247	247
J	mm	255	286	345	345	345	400
J1	mm	512	614	709	707	707	822
K	mm	207	256	308	308	308	320
L	mm	915	915	915	1485	1485	1485
M	mm	685	685	685	685	685	685

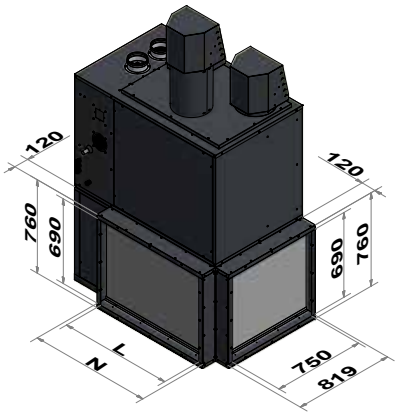
Accessories Dimensions

VPx

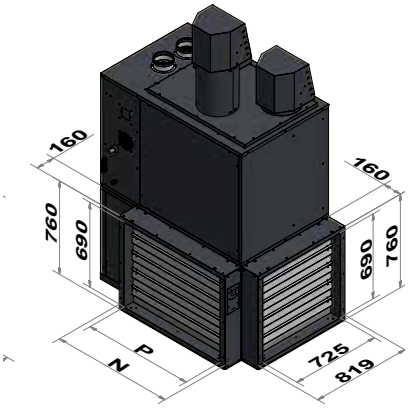
Side/Rear Inlet Spigot



Side/Rear Filters



Side/Rear Dampers



Model	30	50	70	90	120	140
L	915			1485		
N	995			1620		
P	900			1525		

Notes:

- All spigot dimensions are outside dimensions
- EU1 Standard filter specification is 10ppi (parts per inch)
- Higher specification filters available on request - contact our Technical Support Department for more information
- Standard dampers are manual operation - motorised options available
- Installer guidance notes on page 7

Head Plan Options

LNVx

Head Plan 1

(35, 50 & 70)

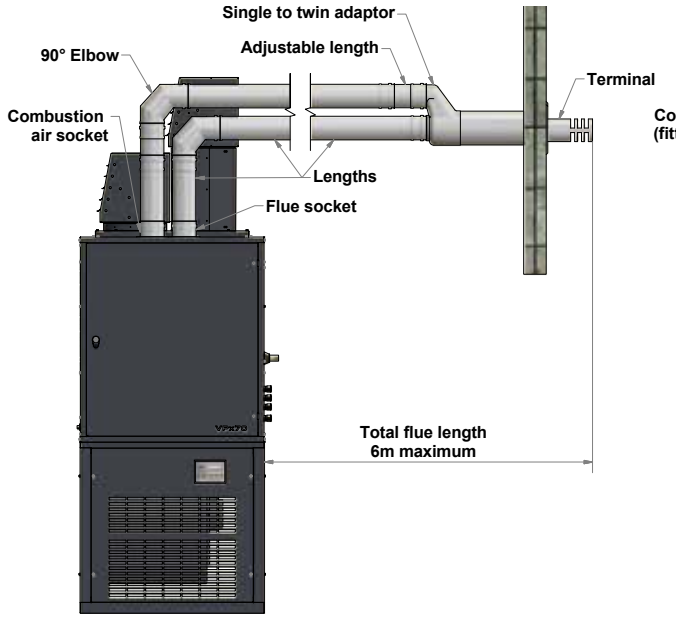
Head Plan 2

(90, 120 & 140 only)

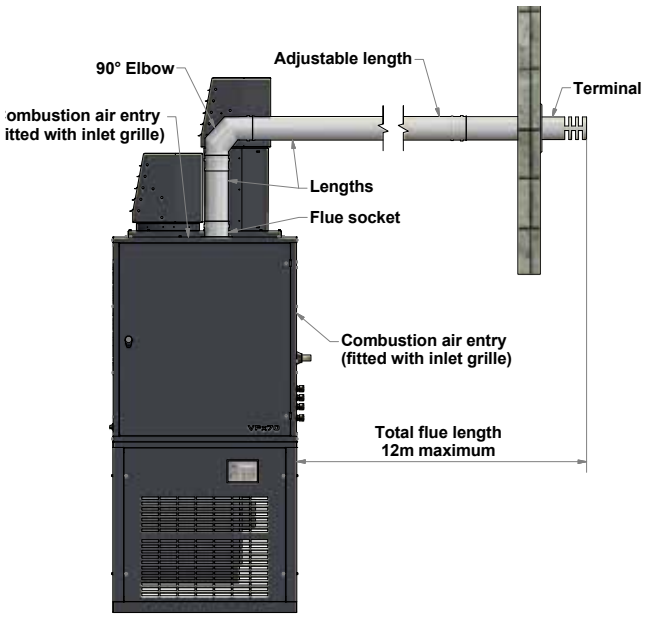
Flue Arrangements

VPx Room Sealed & Flue Only Flue Systems

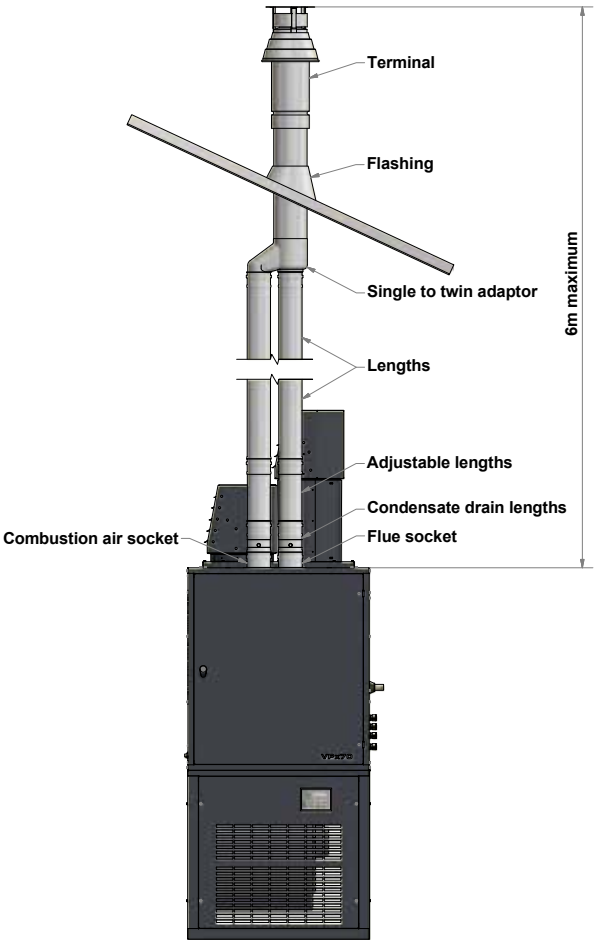
Room Sealed - Horizontal Flue System



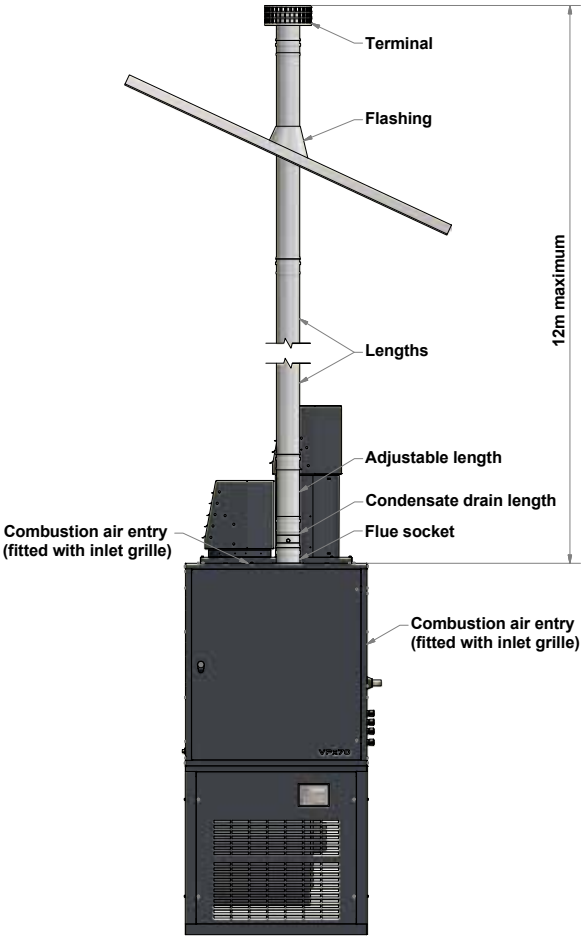
Flue Only- Horizontal Flue System



Room Sealed - Vertical Flue System



Flue Only- Vertical Flue System



Notes for all systems:

- Maximum flue/combustion air length is 6m and on flue only installations maximum flue length is 12m.
- Final overall length of adjustable disconnection piece must be between 360-415mm.
- 45° offsets may be used if required. Each set is equivalent to 0.5m of flue length.
- 90° offsets may be used if required. Each set is equivalent to 1m of flue length.
- Where VPx heaters are used in clean environments it is permissible to take the combustion air directly from the heated space. The supplied mesh intake plate must be fitted to the combustion air inlet on the rear of the heater.
- If fitted with vertical flue, Powrmatic recommend the installation of a condensate drain length.

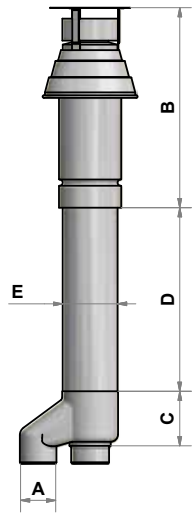
Flue Components

Vertical & Horizontal Flue Kits

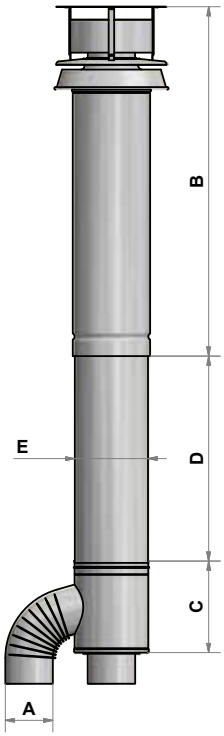
Concentric Vertical Terminal Kit

Unit	Part Number	A mm	B mm	C mm	D mm	E mm
VPx 35 & 50	NVC/VTK2	100	550	145	770	150
VPx 70- 140	NVC/VTK3	130	960	250	560	200

100mm



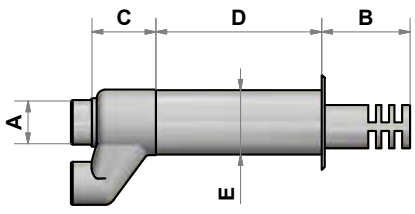
130mm



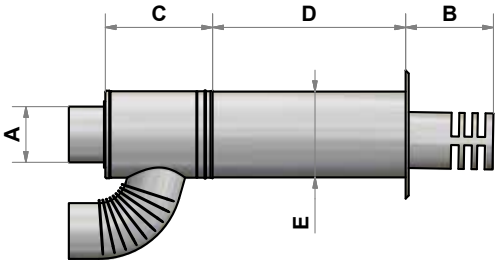
Concentric Horizontal Terminal Kit

Unit	Part Number	A mm	B mm	C mm	D mm	E mm
VPx 35 & 50	NVC/HTK2	100	170	145	560	150
VPx 70- 140	NVC/HTK3	130	185	250	420	200

100mm



130mm



General
The following notes are provided as a guide, however installers and users should fully acquaint themselves with the more detailed guidance provided in the relevant Installation, Operation and Maintenance Manual. For copies of such manuals please consult our technical department or visit our website - www.powrmatic.co.uk

Standards
VPx heaters must be installed, commissioned and operated with due regard to appropriate regulations including but not limited to BS 6230, relevant Codes of Practice, the possible requirements of Local Authorities, Fire Officers and insurers as well as the Installation, Operation and Maintenance Manual.

Position & Location
Heaters should be installed on a level non-combustible base. Consideration should also be given to flue routes and points of exit, gas, electrical and where applicable control connections, the throw characteristics of the heater, issues of public access and in the instance of remote temperature sensors the position needs to be representative of the zone temperature to which they refer.

Heaters should not be installed in hazardous areas or areas where there is a foreseeable risk of flammable or corrosion inducing particles, gases or vapours being drawn into the combustion air or main fan circuits.

Areas where special consideration or advice may be required could include but is not limited to -

- Where de-greasing solvents are present, even in minute concentrations
- Where paint spraying is carried out
- Where styrenes or other laminating products are used
- Where airborne silicone is present
- Where petrol engined vehicles are stored or maintained
- Where dust is present (i.e. wood working or joinery shops)
- Where high levels of extract persist

Installation in such areas may be possible under specific conditions.
Please consult our technical department or your local area sales manager.

Plant Room or Enclosure Locations
Specific requirements exist where heaters are to be installed in a plant room or enclosure. Such requirements include the provision of positive ductwork connections as well as ventilation for combustion air and general ventilation. It is recommended that you consult with our technical department or your local area sales manager for further guidance.

Installation Clearances
Particular clearances may be necessary for the correct and safe function of the heater as well as for maintenance purposes. Such clearances are confirmed in the relevant Installation, Operation and Maintenance Manual.

Combustion Air & General Ventilation
Within the United Kingdom mandatory regulations apply concerning the provision of combustion air and general heater ventilation. Where a heater is installed in room sealed mode (ie where both the flue exit and combustion air are positively connected to atmosphere) then there is no specific requirement for combustion air ventilation. However, depending upon location, provision for general ventilation may still be a necessity.

If the heater is installed in flue only mode and directly within the heated space and where that heated space has a natural ventilation rate greater than 0.5 air changes per hour then combustion air and general heater ventilation is probably not required. If the heated space has a natural ventilation rate of less than 0.5 air changes per hour then either natural ventilator openings or mechanical ventilation will be required. Please consult the Installation, Operation and Maintenance Manual for further details.

Flue
VPx heaters can be installed in either room sealed or flue only mode. Each heater requires a separate flue and/or combustion air intake system of the appropriate size and type. Installers are reminded that type approval has been granted for these appliances on the basis that they are fitted with Powrmatic VPx flue systems. Maximum lengths apply and should be strictly observed.

Systems may be installed in either the horizontal or vertical plane. In either case the number of bends kept to a minimum and regard must be given to the reduction in permissible length with the addition of each bend. The flue must be adequately supported and terminated with the approved terminal assembly, with due regard to the point of exit and it's proximity to any windows, doors or ventilation intakes.

Ductwork
VPx heaters can be fitted with distribution ductwork and/or inlet or return air duct connections. Installers must ensure that the combined duct resistances, including grilles, filters, dampers or other ductwork components are balanced to closely match the static pressure as shown on page 4 of this brochure.

Insufficient or excessive duct resistance will compromise the performance of the heater. Please consult or technical support department or your local area sales manager for further guidance.

Pipework
Care should be taken when sizing pipework to ensure that minimum gas inlet pressures are not compromised under dynamic load conditions. Isolating valves and service unions should be provided for each heater and pipework installed with due regard for relevant standards and Codes of Practice.

Guarantee
Powrmatic VPx heaters are provided with a comprehensive guarantee covering both the heater and the heat exchanger. For United Kingdom sales the heater has the benefit of a two year parts and one year labour guarantee whilst the heat exchanger assembly has a ten year time related warranty. All guarantees are subject to terms and conditions.

TIME RELATED HEAT EXCHANGER WARRANTY

About Us

Powrmatic design, develop and deliver HVAC solutions worldwide across a wide range of commercial and industrial applications creating comfortable and safe environments, differentiated through innovation, integrity, compliance and service.

Our specialised HVAC divisions:

Heating

Industrial and commercial warm air and radiant space heating solutions manufactured to achieve efficient performance, compliance and reliability for every application in partnership with the HVAC trade.

Ventilation

Custom designed highly efficient, cost-effective smoke, natural and powered ventilators manufactured to meet project requirements of building operators, architects, specifiers and contractors.

Air Conditioning

Worldwide distributors of innovative wall mounted heat pumps air conditioner technology providing efficient comfort cooling and heating all year round.

Engineered Products

Bespoke heating and ventilation solutions designed to serve individual customers specific project requirements. In addition our OEM products provide partner AHU manufacturers with high quality energy efficient gas fired heat exchangers.

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