joule
Manufacturing Excellence

Victorum

EXHAUST AIR

HEAT PUMP

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What is a Victorum exhaust air heat pump?

A Victorum EAHP system Combines the aspects of both a conventional air source heat pump and a mechanical extract ventilation system (MEV) to provide 100% of the space heating requirements and DHW demand of a well insulated apartment unit. Ensuring compliance with domestic ventilation regulations and when working efficiently, it can reduce your home's energy consumption for heating by up to 50% when compared to conventional heating systems.

The system functions whereby latent heat from "wet rooms" i.e. kitchen, bathrooms and utility's is extracted via a system of ventilation ductwork to the unit. At the first stage of the process the extracted air passes through a heat exchanger into the sealed refrigerant circuit. The units compression cycle beings to raises the temperature of the refrigerant. The heat is then transferred into a water circuit and finally into either a DHW cylinder or space heating emitters like radiators or UFH systems. The cooled air is then discharged from the unit and exhausted outside.

Benefits Of The Victorum

The Victorum's control produces a very high and economical heat output. The Victorum gives you control over energy consumption and will be a key part of your connected lifestyle. The smart control system automatically adjusts to the indoor climate efficiently for maximum comfort.

- Stand alone heating, hot water & ventilation system
- Satisfies 100% of heating and hot water demand
- Whole house mechanical extract ventilation (MEV)
- Energy recycled from the apartment
- Full compliance with Part L using an all electric solution
- Lower running costs
- Heat pump COP of up to 490% (A20/W35)
- Lower capital cost versus district heating
- No occupier standing charges or scheme management fees
- No gas connection, plantroom maintenance, metering or billing
- Maintenance from central BMS system

Touchscreen Control Panel

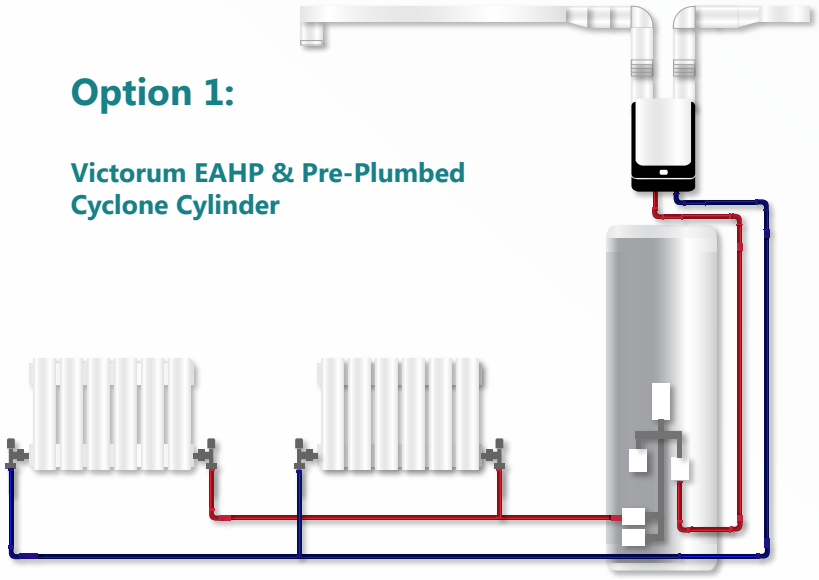
Our Victorum EAHP system controller is responsible for controlling a variety of functions and features for your home including setting the time and temperature for your domestic hot water cylinder and central heating zones.

BOSS

System Options Specification

Option 1:

Victorum EAHP & Pre-Plumbed Cyclone Cylinder

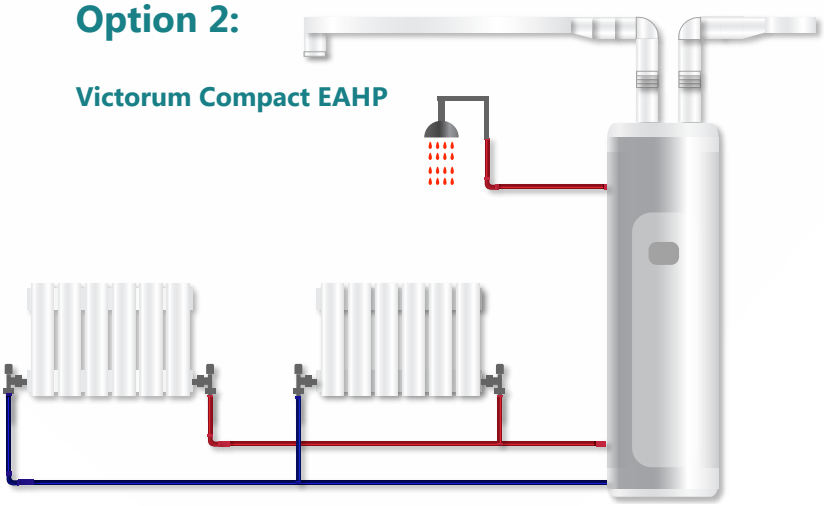


The Victorum EAHP & Cyclone pre-plumbed cylinder are the perfect combination solution for your DHW, central heating and ventilation needs, working perfectly with steel / aluminium radiators or UFH systems.

- DHW.
- 1 or 2 RAD/UFH CH zones.
- Complies with ventilation regulations.

Option 2:

Victorum Compact EAHP

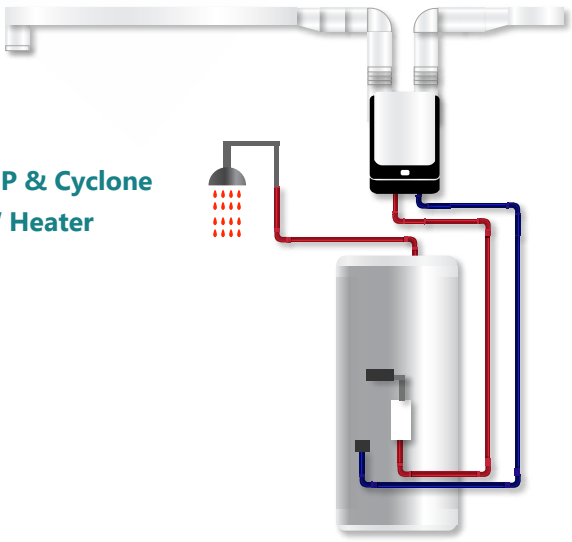


A Victorum Compact retains all of the beneifits of a standard Victorum system while combining both the EAHP unit & cylinder into a single aesthically pleasing cased unit. Its minimalist and unobtrusive design means it is the perfect choice to blend seamlessly into any environment.

- DHW.
- 1 or 2 RAD/UFH CH zones.
- Complies with ventilation regulations.

Option 3:

Victorum EAHP & Cyclone Cylinder DHW Heater



A Victorum EAHP system Combines the aspects of both a conventional air source heat pump and a mechanical extract ventilation system (MEV) to provide 100% of the space heating requirements and DHW demand of a well insulated apartment unit. Ensuring compliance with dome for heating by up to 50%

- DHW.
- Complies with ventilation regulations.

Option 1:

Victorum EAHP & Pre-Plumbed Cyclone Cylinder

Victorum EAHP Specification	
Total Heating Capacity	5 Kw
Max Electrical Power	620 W
Average Electrical Power	300 W
Max Thermal Output	2 Kw
COP (A20, W35)	4.9
Refrigerant	R 134a
Max Flow Temperature	60°C
Max Vent Flow Rate Heating:	120 -250 m3/h
Ventilation Rate Speed 1, 2, 3	50-350 m3/h
Noise Level	<41 dB
Height:	570mm
Width:	500mm
Depth:	500mm
Weight:	45kg
Unit Connections:	150mm
Air Inlet/ Outlet Connections:	150mm
Certifications:	
For Space Heating	I.S. EN 14825
For Hot Water	I.S EN 16147
Test Conditions	I.S EN 14511

Cyclone Cylinder Specification		
Capacity	200L	250L
Cylinder Material	Stainless Steel Duplex LDX 2101	
Thermal Insulation	Polyurethane foam CFC-Free & HCFC Free	
Casing	Painted Galvanised Carbon Steel DX51D	
Coil Material	Stainless Steel Tube AISI 316L	
Weight (empty) kg	47 kg	47 kg
Weight (full) kg	244 kg	47 kg
Max. Operating Pressure	5 (bar)	
Test Pressure	10 (bar)	
Max. Working Temperature	90°c	
Heating Elements	1. No. Incoloy Immersion	
Heat Loss	81 W	87 W
Heat up Time (mins)	31	
Energy Efficiency Class C	C	
Height (mm)	1425mm	1400mm
Diameter (mm)	530mm	600mm

SAP Appendix Q	
Kitchen + 1 Wet Room	0.32
Kitchen + 2 Wet Room	0.29
Kitchen + 3 Wet Room	0.29
Kitchen + 4 Wet Room	0.33
Kitchen + 5 Wet Room	0.39
Kitchen + 6 Wet Room	0.45

EAHP Operation

1.1 Stand Alone heating, hot water & ventilation system

1.2 EAHP Unit to have the following built in components: Heat exchanger, Pump, Flow switch, Unit controls.

1.3 Hot water to be provided via manu facturers pre plumbed cylinder.

1.4 The EAHP will kick into operation to heat the cylinder as soon as a 5° dead band is reached to increase the operational efficiency of the system.

1.5 The system will provide central heating priority.

1.6 The System will incorporate an In-Line 3Kw back up emersion heater.

1.7 Accessories: Strainer, Fill & Flush, Isolation Valve, Remote Controller.

DHW Cylinder Operation

1.1 Joule Cyclone pre-plumbed / pre-wired Indirect DHW cylinder c.w Victorum system wiring centre.

1.2 1 bar working head c/w 3 port control valve.

Compact EAHP Operation

1.1 Stand Alone heating, hot water & ventilation system

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1.3 Hot water to be provided via manufacturers pre plumbed cylinder.

1.4 The EAHP will kick into operation to heat the cylinder as soon as a 5° dead band is reached to increase the operational efficiency of the system.

1.5 The system will provide central heating priority.

1.6 The System will incorporate an In-Line 3Kw back up emersion heater.

1.7 Accessories: Strainer, Fill & Flush, Isolation Valve, Remote Controller.

Option 2:

Victorum EAHP Compact

Victorum EAHP Specification	
Total Heating Capacity	5 Kw
Max Electrical Power	620 W
Average Electrical Power	300 W
Max Thermal Output	2 Kw
COP (A20, W35)	4.9
Refrigerant	R 134a
Max Flow Temperature	60°C
Max Vent Flow Rate Heating:	120 -250 m3/h
Ventilation Rate Speed 1, 2, 3	50-350 m3/h
Noise Level	<41 dB
Height:	570mm
Width:	597mm
Depth:	617mm
Weight:	45kg
Unit Connections:	150mm
Air Inlet/ Outlet Connections:	150mm
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Cyclone Cylinder Specification	
Capacity	180L
Cylinder Material	Stainless Steel Duplex LDX 2101
Thermal Insulation	Polyurethane foam CFC-Free & HCFC Free
Casing	Painted Galvanised Carbon Steel DX51D
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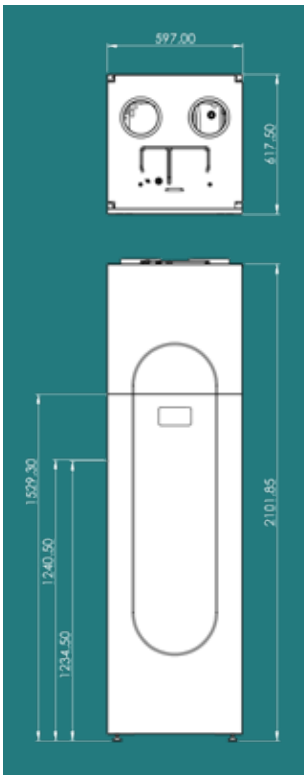
Heat up Time (mins)	31
Energy Efficiency Class C	C
Height (mm)	1425mm
Diameter (mm)	530mm



Option 3:

Victorum EAHP & Cylone Cylinder DHW Only

Victorum EAHP Specification	
Total Heating Capacity	5 Kw
Max Electrical Power	620 W
Average Electrical Power	300 W
Max Thermal Output	2 Kw
COP (A20, W35)	4.9
Refrigerant	R 134a
Max Flow Temperature	60°C
Max Vent Flow Rate Heating:	120 -250 m3/h
Ventilation Rate Speed 1, 2, 3	50-350 m3/h
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Heat up Time (mins)	31
Energy Efficiency Class C	C
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Diameter (mm)	530mm

Aluminium Radiators

With its compact design and its attractive linear shape, RIVA provides a high thermal emission with a low water content and a reduced inertia.

The performance of this radiator perfectly combines with modern heating systems and is an effective response to the need for reduction of energy costs.

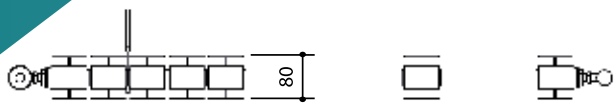
- Available in modular sections
- Ideal for use with Heat Pumps
- 15 years guarantee

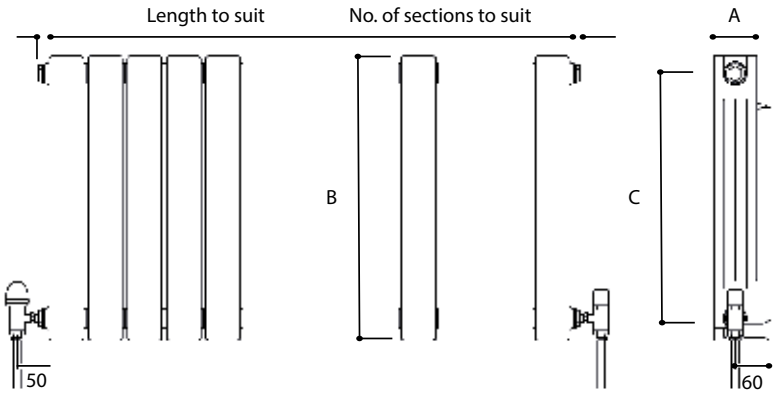
Steel Radiators

Our competive steel range has compact design paired with its high efficiency/ thermal emission making it the perfect choice for any heating systems.

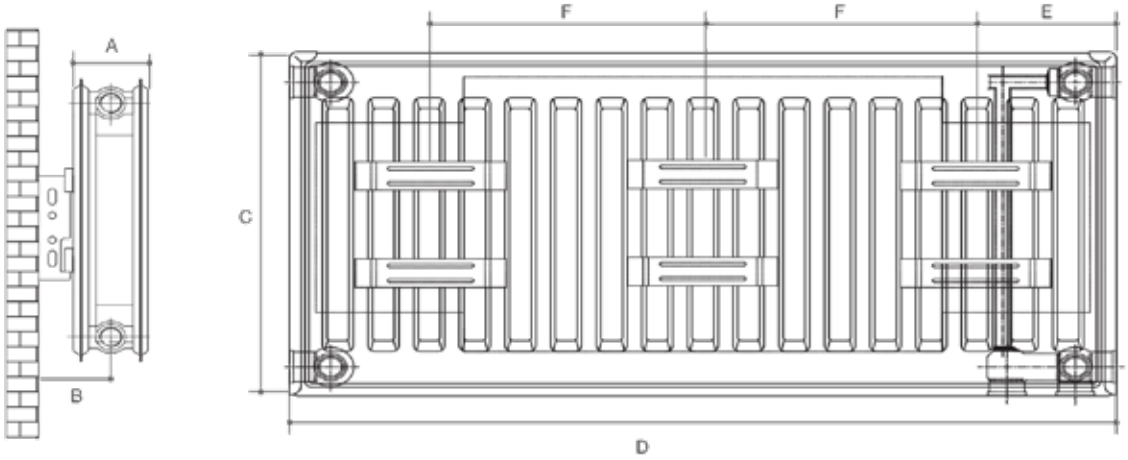
- With or without hanger
- High efficiency,
- Suitable for low temperature
- Perfect corrosion resistance with nano-ceramic surface coating
- 10 year guarantee

Radiator Specs:





Aluminium Radiators



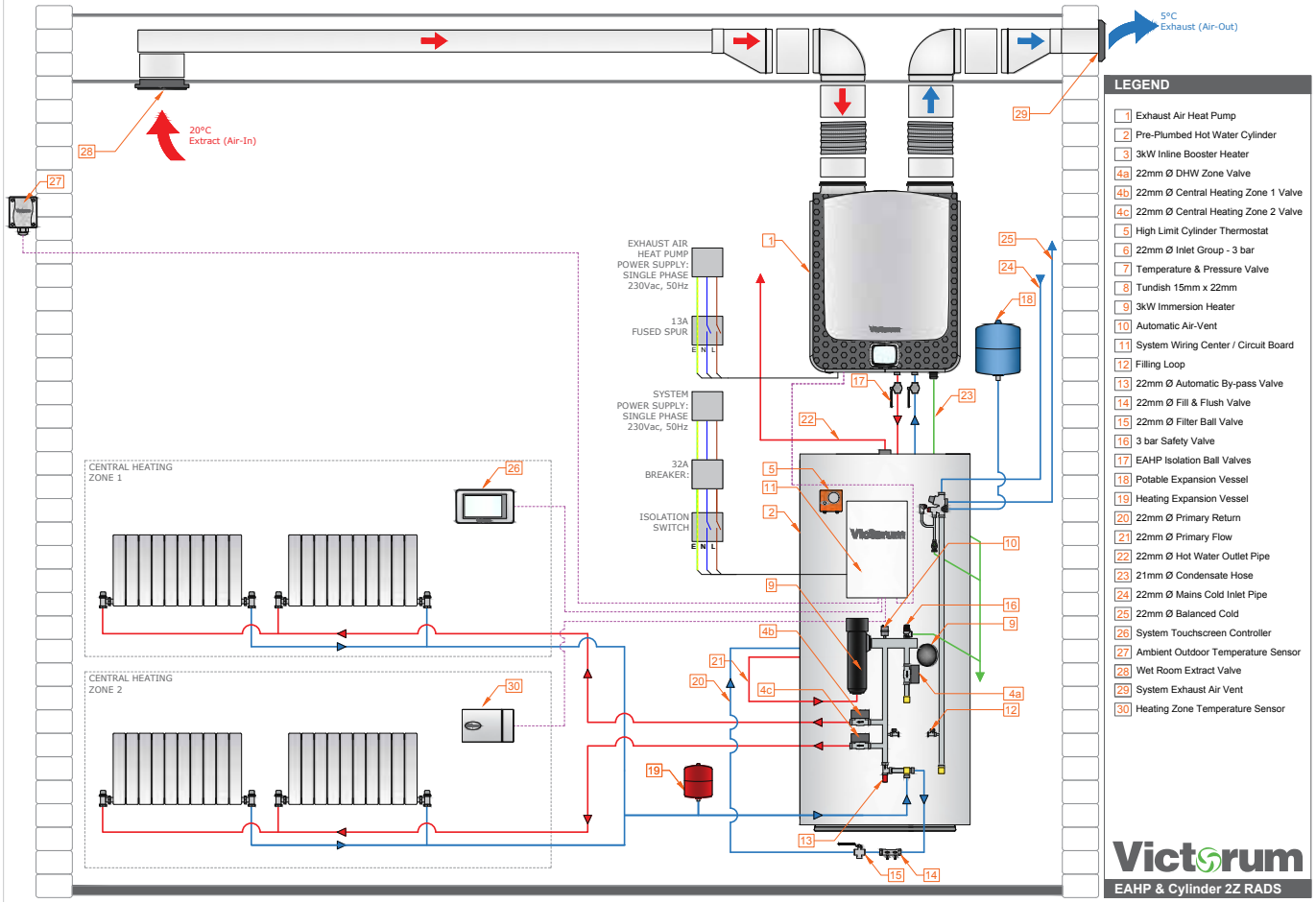
Steel Radiators

EEC 76/769
EN 442-1-2-3

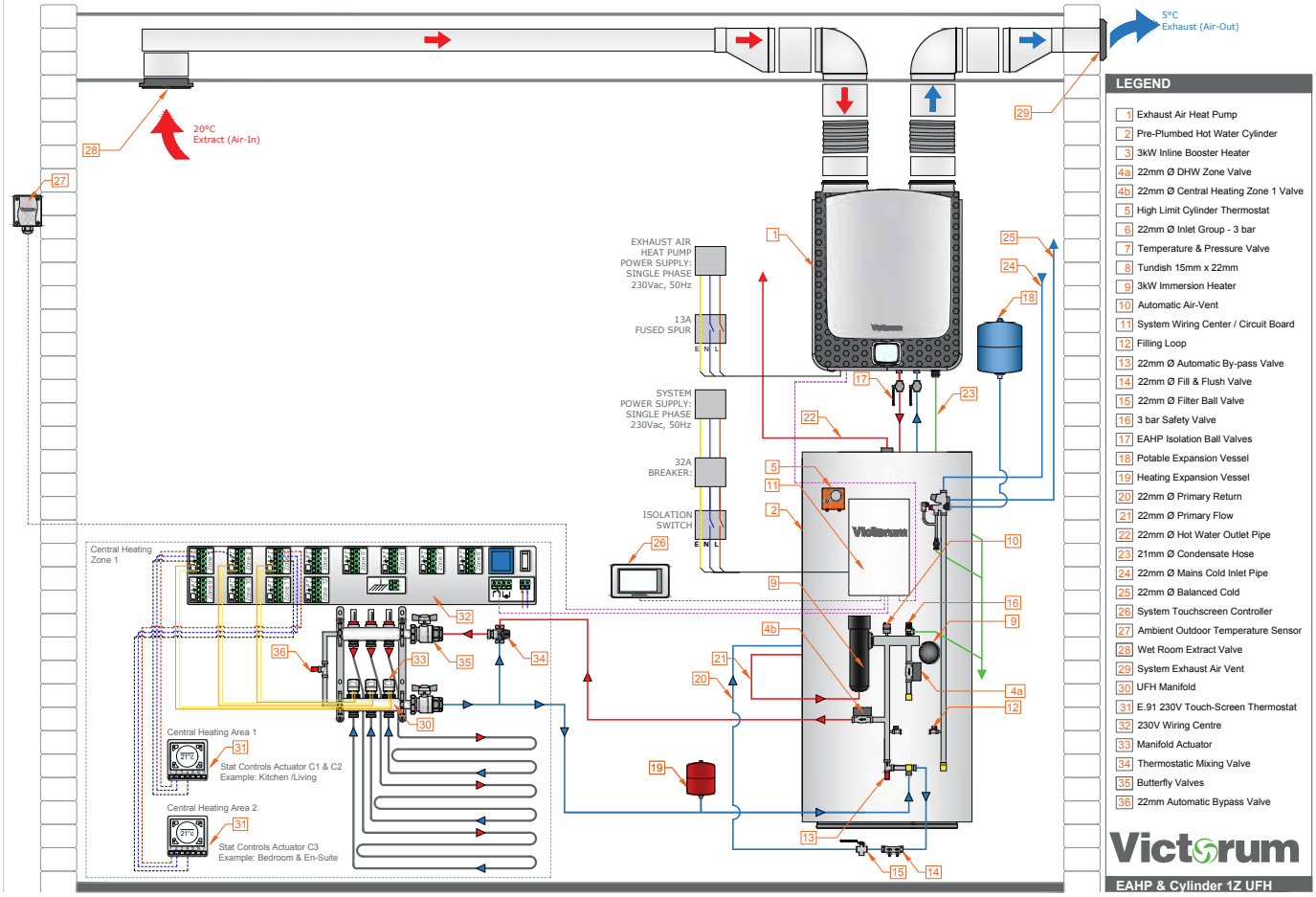
Release of Dangerous Substances	None													
Resistance to Fire	A1													
Maximum Operating Pressure	16 bar													
Test Pressure	27 bar													
	Aluminium Horizontal				Aluminium Vertical						Steel Type 11		Steel Type 22	
Height (mm):	430	580	680	780	1080	1280	1480	1680	1880	2080	500	600	500	600
Km (Coefficient)	0.5667	0.62828	0.7582	0.7996	1.063	1.159	1.3	1.434	1.562	1.685	6.35134	7.33984	10.3724	11.4097
n (Exponent)	1.2845	1.3262	1.3043	1.3332	1.312	1.326	1.327	1.329	1.33	1.331	1.25304	1.25649	1.282	1.295
"QΔt20 (Thermal effect) Watts per Section (80mm)"	26.58	33.39	37.73	43.39	54.14	61.55	69.25	76.85	83.96	90.84	271.09	316.53	482.84	552.21
"QΔt50 (Thermal effect) Watts per Section (80mm)"	86.23	112.55	124.67	147.21	180.13	207.45	233.60	259.70	284.00	307.56	854.56	1000.98	1563.00	1809.01

M & E Schematics

EAHP & Cyclone Pre-Plumbed Cylinder 1 DHW & 2 Zone Radiators

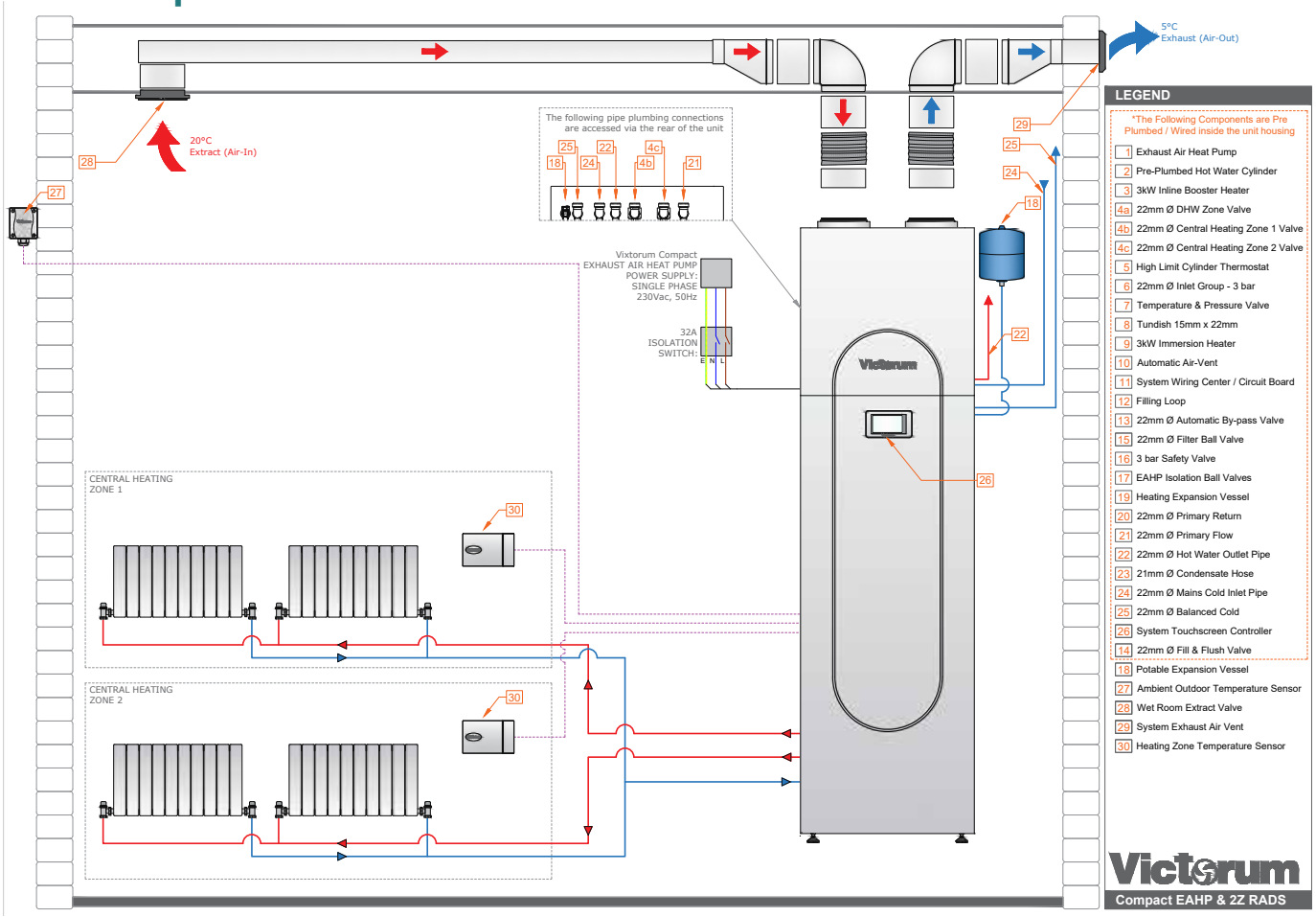


EAHP & Cyclone Pre-Plumbed Cylinder 1 DHW & 1 Zone UFH



M & E Schematics

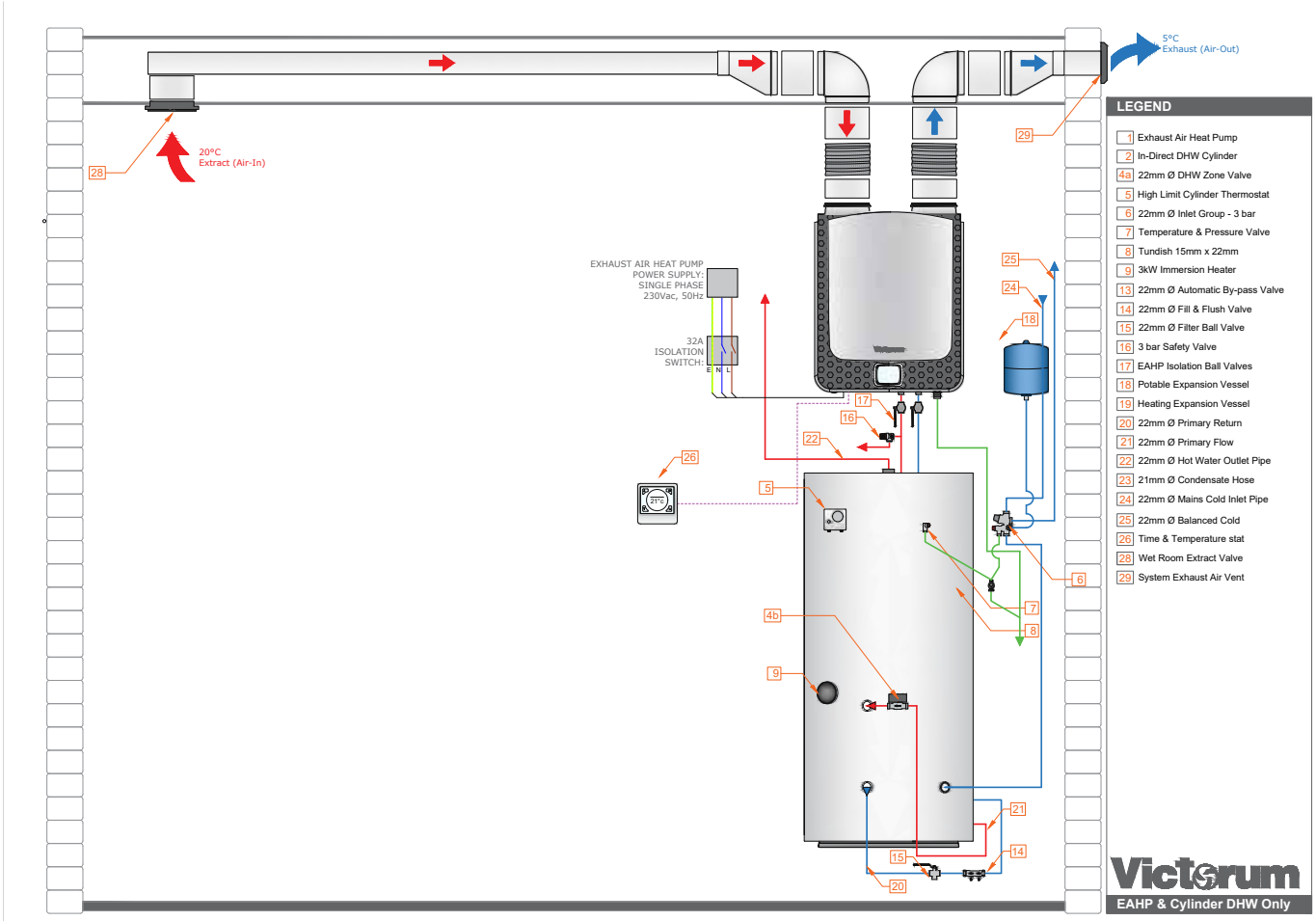
EAHP Compact 1 DHW & 2 Zone Radiators



EAHP Compact 1 DHW & 1 Zone UFH

Option 2: M & E Schematics

EAHP & Cyclone Cylinder DHW



Footprint


Don't trust
nybody w
oesn't ha
sense of
umour!

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