# Material composition

www.stiebel-eltron.co.uk/toolbox/materialtool

## Building project

Longsight Community Centre
Stockport Road 422
M12 4EX Manchester
Stuart Hogg / stuartmichaelhogg@gmail.com

## Customer

Techniheat Plant Services Ltd
Priory House .
SK6 7AN Marple
0161 427 0541
s.welton@techniheat.co.uk
Customer number 1163456

# Table of Contents

Page 3 Your material list

Page 5 Note texts

Page 8 Dimension drawings

Page 9 Article details

Page 14 Energy label

Page 15 Legal notice

## Questions or comments?

Your contact person at Stiebel Eltron will gladly assist you if you have any question about quotation, costing or anything about your project.

STIEBEL ELTRON

Stuart Galloway

Regional Specification Manager, Renewables

07894 483840

stuart.galloway@stiebel-eltron.co.uk

# Your material list

## Heat pump system

| | | | |
|---|---|---|---|
| 1 |  | 4 x Air source heat pump WPL 25 AS<br>Article number 236642<br>3 Phase units may be purchased at the same price | Price each £9,599<br>Total £38,396 |
| 2 |  | 4 x Wall mounting bracket WK 1.1<br>Article number 238686 | Price each £176<br>Total £704 |
| 3 |  | 1 x Heat pump manager WPM, control accessory<br>Article number 234727 | Price each £1,132<br>Total £1,132 |
| 4 |  | 1 x Control unit extension WPE, control unit accessory<br>Article number 234725 | Price each £756<br>Total £756 |
| 5 |  | 1 x Remote control FET, control unit accessory<br>Article number 234723 | Price each £218<br>Total £218 |
| 6 |  | 1 x Internet Service Gateway ISG web, control unit accessory<br>Article number 229336 | Price each £768<br>Total £768 |
| 7 |  | 1 x Buffer cylinder SBP 1000 E, floor mounted cylinder<br>Article number 227564 | Price each £1,705<br>Total £1,705 |
| 8 |  | 1 x Thermal insulation WDH 1000 SBP<br>Article number 231929 | Price each £628<br>Total £628 |
| 9 |  | 4 x Circulation pump UP 25/7.5 PCV<br>Article number 201620<br>These are buffer loading pumps - use existing heating circulation pump sets | Price each £222<br>Total £888 |
| 10 |  | 1 x Flanged immersion heater FCR 28/120, 12 kW, 3/PE 400 V<br>Article number 000694 | Price each £955<br>Total £955 |

# Heat pump system

11 

1 x Heating diverter valve HUV 2
Article number 223391

Price each £663
Total £663

To integrate NEW gas boiler as back-up

## Total price without VAT £46,813

Total price with VAT £56,176

Price valid until 31.12.2022. Optional accessories aren't included in total price.

# Note texts

Completed building estimated at a little over 900m2 heated area.
3 phase electricity supply is available at 100 Amps per phase.
We would suggest a PHE be installed between the existing emitter system and the new heat pump system to avoid contaminants / debris finding it's way back to the new plant.
Basic example hydraulic shown on reply email FYI
3 Phase WPL25A lead time 6-8 weeks depending on production.

The heat emitters need to be sized for a lower flow temperature to make the best of the efficiencies of the heat pump system.
Fan coils may be considered in the main hall(s) due to the high ceilings for air / heat circulation.

# Cable list

## Power supply

| Description | Starting point | Target point | Voltage | Cross section | Fuse |
|---|---|---|---|---|---|
| Power supply | WPM International - terminal X2.1 / X2.2 | Control cabinets / subdistribution | 230V | 5x1,5mm² | 1xB16A |

## Control line

| Description | Starting point | Target point | Voltage | Cross section | Fuse |
|---|---|---|---|---|---|
| Buffer charging pump 1 | WPM International - terminal X.2.6 | Charging pump | 230V | 3x1,5mm² | via WPM International |
| Heating circuit pump 1 | WPM International - terminal X.2.3 | Heating circuit pump | 230V | 3x1,5mm² | via WPM International |
| Heating circuit pump 2 | WPM International - terminal X.2.4 | Heating circuit pump | 230V | 3x1,5mm² | via WPM International |
| Mixer heating circuit 2 | WPM International - terminal X.2.14 | Mixer | 230V | 5x1,5mm² | via WPM International |

## Data line

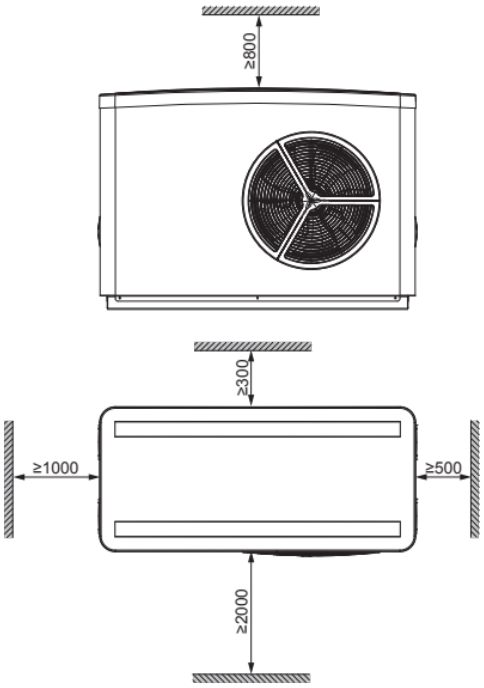
| Description | Starting point | Target point | Voltage | Cross section | Fuse |
|---|---|---|---|---|---|
| CAN A | WPM International - terminal X.1.1 | Heat pump | Low voltage | J-Y (St) 2x2x0,8 | via WPM International |
| CAN A WP2 | WPM International - terminal X.1.1 | Heat pump 2 | Low voltage | J-Y (St) 2x2x0,8 | via WPM International |
| CAN A WP3 | WPM International - terminal X.1.1 | Heat pump 3 | Low voltage | J-Y (St) 2x2x0,8 | via WPM International |

## Sensor line

| Description | Starting point | Target point | Voltage | Cross section | Fuse |
|---|---|---|---|---|---|
| Outside temperature sensor | WPM International - terminal X.1.3 | North side building facade | Low voltage | 2x2x0,8mm / 2x0,75mm² | via WPM International |
| Sensor buffer tank / sensor heating circuit 1 | WPM International - terminal X.1.4 | Buffer tank (immersion sensor) | Low voltage | 2x2x0,8mm / 2x0,75mm² | via WPM International |
| Heating circuit sensor 2 | WPM International - terminal X.1.6 | Pipe (contact sensor) | Low voltage | 2x2x0,8mm / 2x0,75mm² | via WPM International |

# Dimension drawings

## Minimum distance Air source heat pump WPL 25 AS



# Article details

## Air source heat pump WPL 25 AS

Product Area Heat pump



| | |
|---|---|
| **Position** | **1** |
| Name | WPL 25 AS |
| Article number | 236642 |
| Price each | £9,599 |

Product data

Application • This air source heat pump with output-dependent control and inverter technology is installed outdoors. The compact mono block design is also suitable for use in modernised older buildings thanks to the demand-dependent high flow temperatures.Convenience features • Very quiet operation thanks to encapsulated refrigerant circuit and acoustically isolated compressor. Contributing to the low sound power level are the modulating fans and the wide gaps between the evaporator fins which reduce air resistance. The combined enhanced vapour injection/enhanced saturated vapour injection cools the scroll compressor at low outside temperatures, enabling a higher heating output/flow temperature to be achieved. • When combined with the Internet Service Gateway (ISG), the integral heat pump manager allows the system to be controlled in the home network or from a mobile device. With integral heat and electricity metering via refrigerant circuit data. • The emergency/auxiliary heater enables mono energetic operation. The refrigerant circuit is hermetically sealed, tested for leaks at the factory and filled with safety refrigerant R410A. • The enamelled, corrosion-protected metal casing in alpine white is made from hot-dip galvanised, powder coated sheet steel. Fan grille, recessed grips and cover are made from weatherproof and UV-resistant plastic in aluminium white.Efficiency • The waste heat from the inverter is used to raise the return temperature. In addition, the overall efficiency of the system is increased by on-demand defrosting through circuit reversal and heating of the condensate pan by the refrigerant circuit. • The hydrophilic coating on the fan nozzle prevents ice from forming, meaning that no electric heating is required.Installation • Integral anti-vibration mounts for direct connection to the heating system. • The pivoting electrical connection panel makes installation easier. The condensate pan is easy to reach through a cleaning aperture on the back of the casing.

## Wall mounting bracket WK 1.1

Product Area Heat pump



| | |
|---|---|
| **Position** | **2** |
| Name | WK 1.1 |
| Article number | 238686 |
| Price each | £176 |

Product data

Wall mounting bracket made from corrosion-protected zinc-plated steel. Height-adjustable wall rail, the heat pump can be aligned with the aid of the appliance rail. Standard delivery includes: 2 pce, incl. anti-vibration mounts.

## Heat pump manager WPM, control accessory

Product Area Heat pump



| | |
|---|---|
| **Position** | **3** |
| Name | WPM |
| Article number | 234727 |
| Price each | £1,132 |

Product data

Application • The WPM heat pump manager is the main controller in the system. One direct and two heating circuits with mixer can be controlled via the integral programming unit. Two heat pumps can also be operated in a cascade. • If the WPM is combined with the Internet Service Gateway (ISG), the heat pump can be integrated into a home network or controlled from mobile devices. • Direct connection of high efficiency circulation pumps is possible via relay outputs or PWM outputs. • The WPM also provides a fault contact for external pick-up of system faults. • A drip-proof wall mounted enclosure with large installation area provides sufficient space for the electrical connections and other components such as the top-hat rail relays. • A well designed cable layout ensures easy connection.

## Control unit extension WPE, control unit accessory

Product Area Heat pump



| | |
|---|---|
| **Position** | **4** |
| Name | WPE |
| Article number | 234725 |
| Price each | £756 |

Product data

Application • The WPE adds numerous functions to the WPM heat pump manager. It offers two additional heating circuits with mixer, a swimming pool controller and cascade control for up to six heat pumps. Two additional 0-10 V interfaces, a differential controller and switching outputs are also available. • The enclosure is installed to the right or left of the WPM and is connected with it to the power supply and via the bus. • The module's additional functions can be set at the programming unit of the WPM.

## Remote control FET, control unit accessory

Product Area Heat pump



| | |
|---|---|
| **Position** | **5** |
| Name | FET |
| Article number | 234723 |
| Price each | £218 |

Product data

FET digital remote control for convenient control of a heating zone. The remote control measures the relative humidity and room temperature.

## Internet Service Gateway ISG web, control unit accessory

Product Area Heat pump



| | |
|---|---|
| **Position** | **6** |
| Name | ISG web |
| Article number | 229336 |
| Price each | £768 |

Product data

Application • The Internet Service Gateway (ISG) connects the heat pump to the home network and enables the appliance to be operated using a browser. • Once enabled, appliance data is transferred to the Stiebel Eltron Internet Service Portal. • The ISG plus is a required accessory for use of the SG Ready functions of the WPM heat pump manager. The ISG can be integrated into an existing building management system via the Modbus TCP/IP data interface.

## Buffer cylinder SBP 1000 E, floor mounted cylinder

Product Area Heat pump



| | |
|---|---|
| **Position** | **7** |
| Name | SBP 1000 E |
| Article number | 227564 |
| Price each | £1,705 |

Product data

Application • Buffer cylinder for heating heat pumps in large systems. The cylinder enables hydraulic separation between the heat pump and heating circuit flows, extends the operating time of the heat pump and stores heating energy. Suitable for use in apartment buildings and commercial buildings.Convenience features • Steel cylinder with flange connections arranged at the front, one above the other, for the primary and secondary circuit. There is also an additional connector for combination with further heat generators. An additional indirect coil or a flanged immersion heater can also be fitted as required for the specific system. For this purpose, a flanged aperture sealed with a blank flange has been integrated. The SOL types are, in addition, equipped with an internal smooth tube solar indirect coil.Efficiency • Low standby losses in conjunction with the high grade thermal insulation as an accessory. Good temperature stratification due to matched inlet and outlet technology. Designed for connecting heat pumps with high flow rates on the primary side.

## Thermal insulation WDH 1000 SBP

Product Area Heat pump



| | |
|---|---|
| **Position** | **8** |
| Name | WDH 1000 SBP |
| Article number | 231929 |
| Price each | £628 |

Product data

Application • High grade thermal insulation made from EPS rigid foam with insulated cover and floor disc. Graphite inserts in the EPS and the fleece ensure lowest heat losses. • The wedge-shaped cut-outs and fleece layer ensure that the thermal insulation can be optimally adapted to the cylinder. The prepared adhesive joints in the wedge-shaped cut-outs also contribute to this. • The outer plastic jacket is white; the cover is grey. • The thermal insulation is attached by means of a quick-release hook strip.

## Circulation pump UP 25/7.5 PCV

Product Area Heat pump



| | |
|---|---|
| **Position** | **9** |
| Name | UP 25/7.5 PCV |
| Article number | 201620 |
| Price each | £222 |

Product data

Heating circuit pump. Energy efficient thanks to the integral electronic output control for pumping the heat transfer medium and the variable differential control.

## Flanged immersion heater FCR 28/120, 12 kW, 3/PE 400 V

Product Area Hot water



| | |
|---|---|
| **Position** | **10** |
| Name | FCR 28/120 E |
| Article number | 000694 |
| Price each | £955 |

Product data

Application • Flanged immersion heaters for horizontal installation in sealed DHW cylinders with flange connectors to DIN 4805. • Variable temperature selection and temperature limiting possible. • Observe the details supplied by the cylinder manufacturer and DIN 4753 or DIN 4751.

## Heating diverter valve HUV 2

Product Area Heat pump



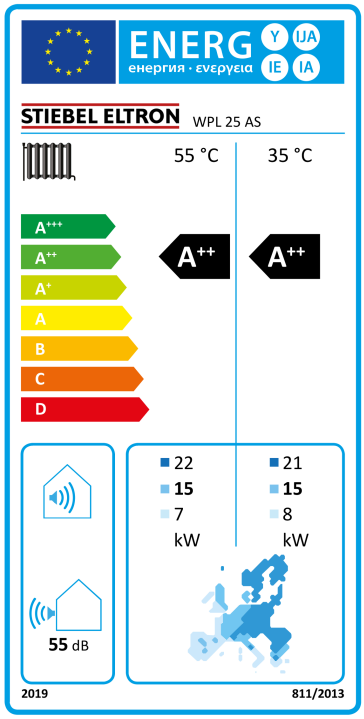
| | |
|---|---|
| **Position** | **11** |
| Name | HUV 2 |
| Article number | 223391 |
| Price each | £663 |

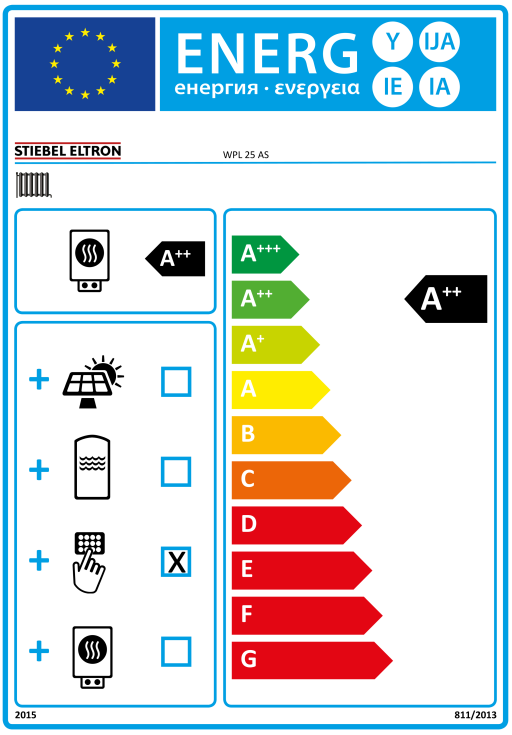
Product data

3-way heating diverter valve with servomotor for installation in heating systems.

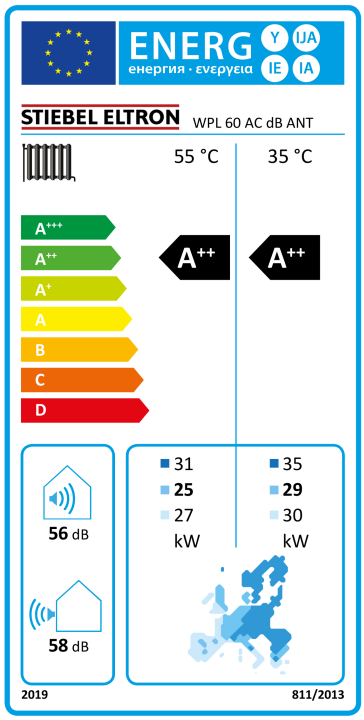
# Energy label

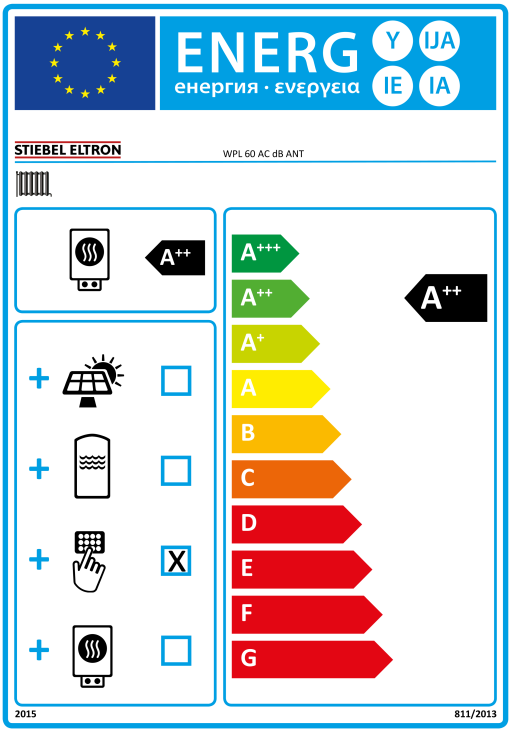
## Energy label Air source heat pump WPL 25 AS




## Energy label Buffer cylinder SBP 1000 E, floor mounted cylinder



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