# Fresh Air Ventilation and Heat Exchange unit SAF-E4

**Model No.**
SAF250E4
SAF350E4
SAF500E4
SAF800E4
SAF1000E4

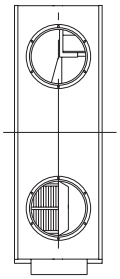
## Re; Building Regulations Part L2

The Part L2 (April 2006) regulations limit the amount of electrical/gas power to be used to provide heating or cooling in commercial buildings. Therefore the building designer needs to select energy efficient heating/cooling equipment, and to minimise energy losses through ventilation systems.

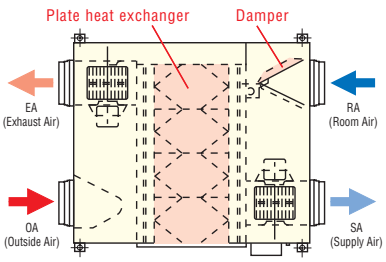
The SAF recovers heat energy which would otherwise be exhausted to atmosphere, and uses this energy to warm the air entering the building. The reverse happens in warmer climates, where the exhausted cool air is used to partially cool the incoming air.

Capturing this waste energy, means the heating/ cooling requirements of the building are reduced, so smaller size plant can be selected, savings can be made in long term energy consumption, and carbon emissions are reduced.

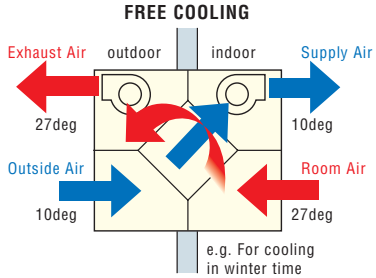
The inclusion of the SAF energy recovery ventilation units in the building design, will reduce the total amount of carbon emissions.



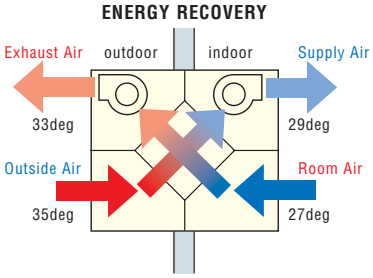
Structure (SAF1000E4)




Principle of operation (simple ventilation)




Principle of operation (heat exchanging)



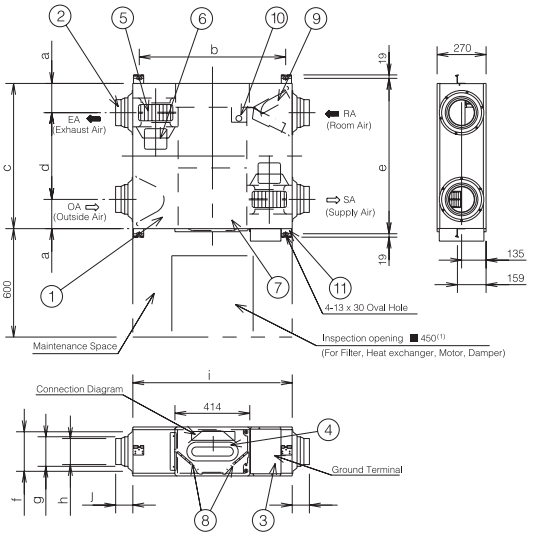

## Specifications

| Item | | | Model | SAF250E4 | SAF350E4 | SAF500E4 | SAF800E4 | SAF1000E4 |
|---|---|---|---|---|---|---|---|---|
| Power source | | | | 1 Phase 220-240V, 50Hz | | | | |
| Exterior dimensions Height x Width x Depth | | | mm | 270x882x599 | 170x882x804 | 270x962x904 | 388x1322x884 | 388x1322x1135 |
| Exterior appearance | | | | Galvanised steel sheet | | | | |
| | Power input | | W | 99-114 | 124-137 | 169-188 | 309-359 | 360-399 |
| | Running current | | A | 0.46-0.48 | 0.59-0.60 | 0.79-0.81 | 1.48-1.50 | 1.85-1.93 |
| Capacity | UHi | Enthalpy exchange efficiency | Cooling | 63 | 66 | 62 | 65 | |
| | | | Heating | 70 | 69 | 67 | 71 | |
| | | Temperature exchange efficiency | | 75 | | | | |
| | Hi | Enthalpy exchange efficiency | Cooling | 63 | 66 | 62 | 65 | |
| | | | Heating | 70 | 69 | 67 | 71 | |
| | | Temperature exchange efficiency | | 75 | | | | |
| | Lo | Enthalpy exchange efficiency | Cooling | 66 | 69 | 77 | 68 | 68 |
| | | | Heating | 73 | 71 | 67 | 74 | 73 |
| | | Temperature exchange efficiency | | 77 | 77 | 75 | 76 | 76 |
| Motor & Q'ty | | | kW | 0.02x2 | 0.044x2 | 0.062x2 | 0.117x2 | 0.137x2 |
| Air handling equipment Fan type & Q'ty | | | | Sirocco fan x 2 | | | | |
| Air flow | | UHi | $m^3/h$ | 250 | 350 | 500 | 800 | 1000 |
| | | Hi | | 250 | 350 | 500 | 800 | 1000 |
| | | Lo | | 170 | 280 | 370 | 650 | 810 |
| Available static pressure | | UHi | Pa | 90 | 95 | 105 | 140 | 90 |
| | | Hi | | 80 | 65 | 70 | 110 | 55 |
| | | Lo | | 37 | 42 | 38 | 70 | 35 |
| Remote control | | | | Standard equipment | | | | |
| Air filter | Out take intake air | | | Protection for element (Washable) PS400 | | | | |
| | Exhaust air | | | | | | | |

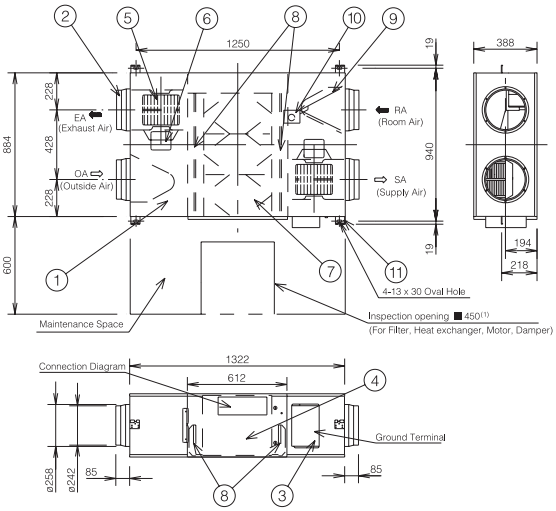
# Dimensions

All measurements in mm.

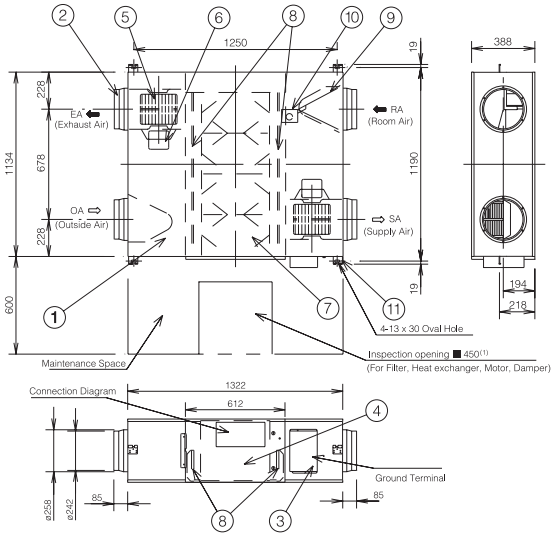
## SAF250E4,350E4,500E4



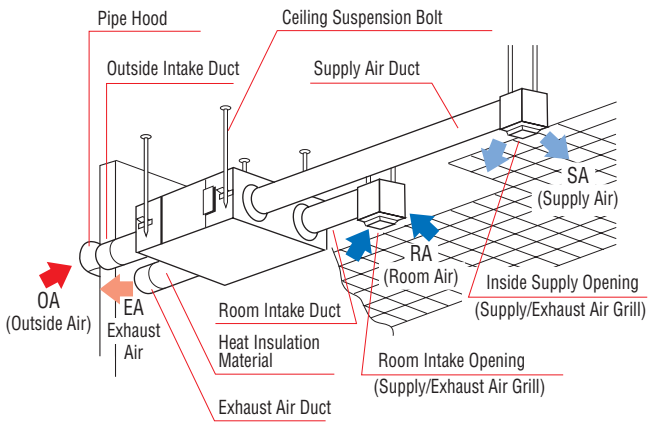

## SAF800E4




## SAF1000E4




## Installation reference




| NO. | Name | Quantity | Material | Remarks |
|---|---|---|---|---|
| 1 | Frame | 1 | Zinc-plated steel | |
| 2 | Adaptor | 4 | ABS Resin | |
| 3 | Electrical Equipment Box | 1 | | |
| 4 | Inspection Cover | 1 | Zinc-plated steel | |
| 5 | Fan | 2 | ABS Resin | |
| 6 | Motor | 2 | | |
| 7 | Heat Exchange Element | 2 | Flame Retardant Paper + Plastic | Air to air Heat Exchanger |
| 8 | Filter | 2 | Non-woven Cloth | Collection Efficiency Gravimetric Method 82% |
| 9 | Damper | 1 | | |
| 10 | Damper Motor | 1 | | |
| 11 | Ceiling Suspension Fixture | 4 | Zinc-plated Steel | |

Note(1) An inspection port is needed for cleaning the heat exchanger and filter 1 or 2 times a year.

## Dimension table

Unit:mm

| Model | a | b | c | d | e |
|---|---|---|---|---|---|
| SAF250E4 | 142 | 810 | 599 | 315 | 655 |
| SAF350E4 | 162 | 810 | 804 | 480 | 860 |
| SAF500E4 | 202 | 890 | 904 | 500 | 960 |

| Model | f | g | h | i | j |
|---|---|---|---|---|---|
| SAF250E4 | ø219 | ø164 | ø144 | 882 | 95 |
| SAF350E4 | ø219 | ø164 | ø144 | 882 | 95 |
| SAF500E4 | ø246 | ø210 | ø194 | 962 | 107 |