

Planning, Reading Borough Council
1 Bridge Street, Reading –
Sent via email to:
Nathalie Weekes
via:
matthew@etplanning.co.uk
11 April 2022

Dear Mrs Nathalie Weekes,

RE: Windows and heating/cooling strategy at 303-305 Oxford Road

We act on behalf of our client, Mr Surit Patel, who is the owner of 303-305 Oxford Road, Reading, RG30 1AU.

Please accept this emailed letter to show support for the application.

I write to provide information on the heating/cooling system and windows for planning permission 211425 which is described as *Conversion of existing house into two dwellings, creation of 3 additional C3 units at ground floor, erection of a single storey rear extension raising of roof height and formation of rear-facing roof dormer, first floor balcony, and fenestration changes including the insertion of front-facing roof windows and rendering. Part retrospective.*

Heating/ Cooling Strategy

Provisions are made for ventilation cooling to mitigate overheating in accordance with the report by *Hawkins Environmental Noise Assessment* dated 10th February 2022.

A Mitsubishi MVHR product such as the Fresh Air Ventilation and Heat Exchange Unit SAF-E7 (or equivalent) is to be installed to provide heating and cooling. The unit is suitable to meet the flow requirement for each flat:

SAF Calculations		
	Flat Area	recommended SAF Unit
Flat 1&2	92.5m ³ x 2 ACPH = 185m ³ /ph	SAF250
Flat 3&4	97.5m ³ x 2 ACPH = 195m ³ /h	SAF250
Flat 5&6	180m ³ X 2 ACPH = 360m ³ /h	SAF500

Each flat will receive one of each unit to service the whole space. Units are to be installed at high level in the principle bedroom cupboards.

Windows

Frames – new windows are to be uPVC to match existing.

Glazing - new windows are use standard double glazing to match existing, and are to be WER Band C or better, or U-value 1.6W/m²K per Approved Document L1B (2010 edition incorporating 2010, 2011, 2013 and 2016 amendments). Standard double glazing used to achieve a R_w of 33 or more, suitable to preserve a suitable

internal noise level in accordance with the report by *Hawkins Environmental Noise Assessment* dated 10th February 2022.

We would be pleased if you could consider the points above and would be grateful for you to inform us if you have any specific comment/feedback to make your decision.

Yours Sincerely,



Henk Wieringa MSc Arch RIBA, Partner

Our ref: 044P3 Information on windows and heating & cooling for permission 211425

Appendix A: Mitsubishi SAF-E7 Technical Specification



Fresh Air Ventilation and Heat Exchange unit SAF-E7

Model No.

SAF150E7
SAF250E7
SAF350E7
SAF500E7
SAF800E7
SAF1000E7

NEW



Energy Performance of Building Directive - EPBD

EPBD 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.

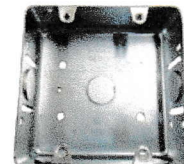
Capturing this waste energy, means the heating/ cooling requirements of the building are reduced, so smaller size plant can be selected, savings can be made in long term energy consumption, and carbon emissions are reduced.

NEW

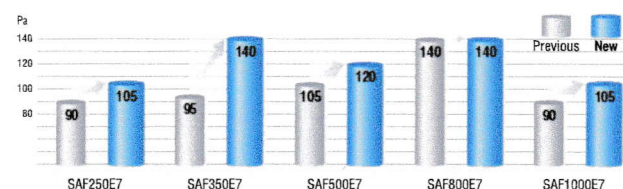


NEW

Switch box (option)



Increased external static pressure at UHI air flow



Remote control

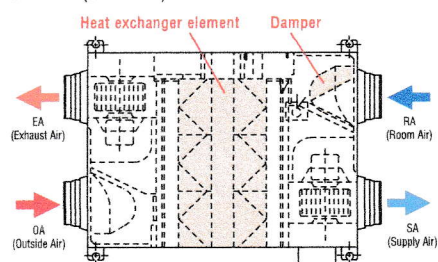
The following functions are newly available.

- ON/OFF Timer – The hour and minute of timer on/off can be set.
- Filter Sign – Announces the due time for cleaning the air filter.

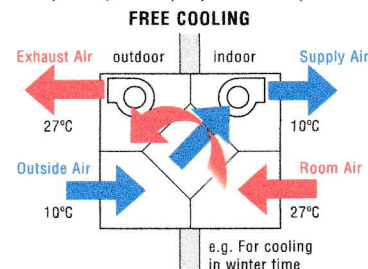
Specifications

Item				Model	SAF150E7	SAF250E7	SAF350E7	SAF500E7	SAF800E7	SAF1000E7
Power source					1 Phase 220-240V, 50Hz					
Exterior dimensions Height x Width x Depth				mm	270x970x467	270x882x599	317x1050x804	317x1090x904	388x1322x884	388x1322x1134
Exterior appearance					Galvanized steel sheet					
Power input				W	92-107	108-123	178-185	204-225	360-378	416-432
Running current				A	0.42-0.45	0.49-0.51	0.81-0.77	0.93-0.94	1.64-1.58	1.89-1.80
Capacity	UHi	Enthalpy exchange efficiency	%	63	63	66	62	65	65	
		Heating		70	70	69	67	71	71	
		Temperature exchange efficiency		75						
	Hi	Enthalpy exchange efficiency		63	63	66	62	65	65	
		Heating		70	70	69	67	71	71	
		Temperature exchange efficiency		75						
	Lo	Enthalpy exchange efficiency		66	65	71	64	68	70	
		Heating		73	72	73	69	74	76	
		Temperature exchange efficiency		77	77	78	76	76	79	
Motor & Q'ty				W	10 x 2	20 x 2	40 x 2	70 x 2	180 x 2	180 x 2
Air handling equipment Fan type & Q'ty					Sirocco fan x 2					
Air flow	UHi	m³/h	150	250	350	500	800	1000		
	Hi		150	250	350	500	800	1000		
	Lo		120	190	240	440	630	700		
External static pressure	UHi	Pa	80	105	140	120	140	105		
	Hi		70	95	60	60	110	80		
	Lo		25	45	45	35	55	75		
Net weight				kg	25	29	49	57	71	83
Remote control					Included					
Air filter	Supply air		Protection for element (Washable) PS400							
	Exhaust air									

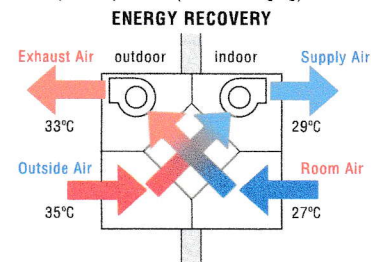
Structure (SAF800E7)



Principle of operation (simple ventilation)



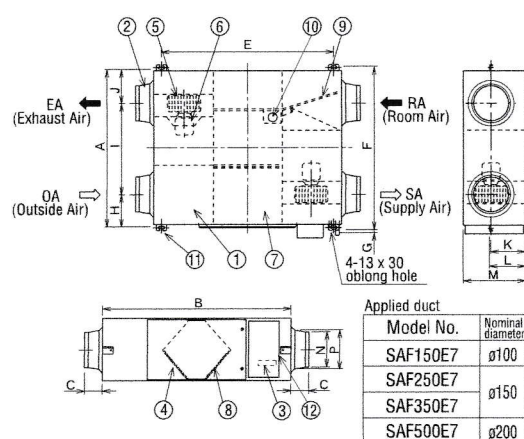
Principle of operation (heat exchanging)



Dimensions

All measurements in mm.

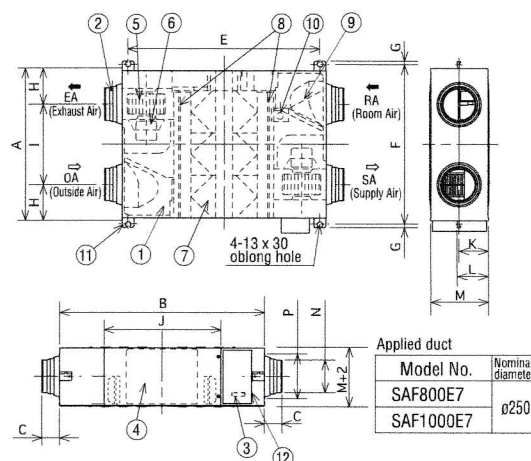
SAF150E7, SAF250E7, SAF350E7, SAF500E7



Dimension table

Model	A	B	C	E	F	G	H	I	J	K	L	M	N	P
SAF150E7	467	970	49	810	525	19	82	303	82	135	159	270	ø98	ø110
SAF250E7	599	882	95	810	655	19	142	315	142	135	159	270	ø144	ø164
SAF350E7	804	1050	70	978	860	19	112	580	112	159	182	317	ø164	ø164
SAF500E7	904	1090	70	1018	960	19	132	640	132	159	182	317	ø194	ø210

SAF800E7, SAF1000E7



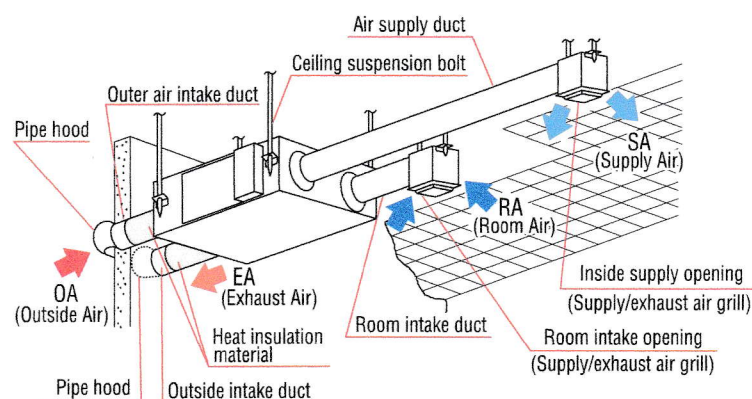
Dimension table

Model	A	B	C	E	F	G	H	I	J	K	L	M	N	P
SAF800E7	884	1322	85	1250	940	19	228	428	612	194	218	388	ø242	ø258
SAF1000E7	1134	1322	85	1250	1190	19	228	428	612	194	218	388	ø242	ø258

NO.	Name	Qt'y
①	Frame	1
②	Adaptor	4
③	Terminal board	1
④	Inspection Cover	1
⑤	Fan	2 ※
⑥	Motor	2 ※
⑦	Heat Exchange Element	
	SAF150E7	1
	SAF250E7	1
	SAF350E7	2
	SAF500E7	2
	SAF800E7	3
	SAF1000E7	4
⑧	Filter	2
⑨	Damper	1
⑩	Damper Motor	1
⑪	Suspension fitting	4
⑫	Electrical components box	1

※Model SAF350E7, SAF500E7 have different fan and motor locations.

Installation reference



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