ECO-AIRVENT™

VHR-CF Commercial Void Mounted Heat Recovery Unit Range
Installed Duty: 25l/s – 600l/s
Up to 90% Efficient Heat Reclaim

BB101 Compliant

ULTRA LOW PROFILE DESIGN

0.9 W/l/s TOTAL SFP

- FULLY COMPLIANT WITH NON-DOMESTIC BUILDING SERVICES DIRECTIVE 2013
- ERP2018 COMPLIANT
- 100,000 HOUR LONG LIFE EC FANS
- 100% SUMMER BYPASS

Made in the UK

Quietly Saving Energy

VHR-CF Unit Dimensions:

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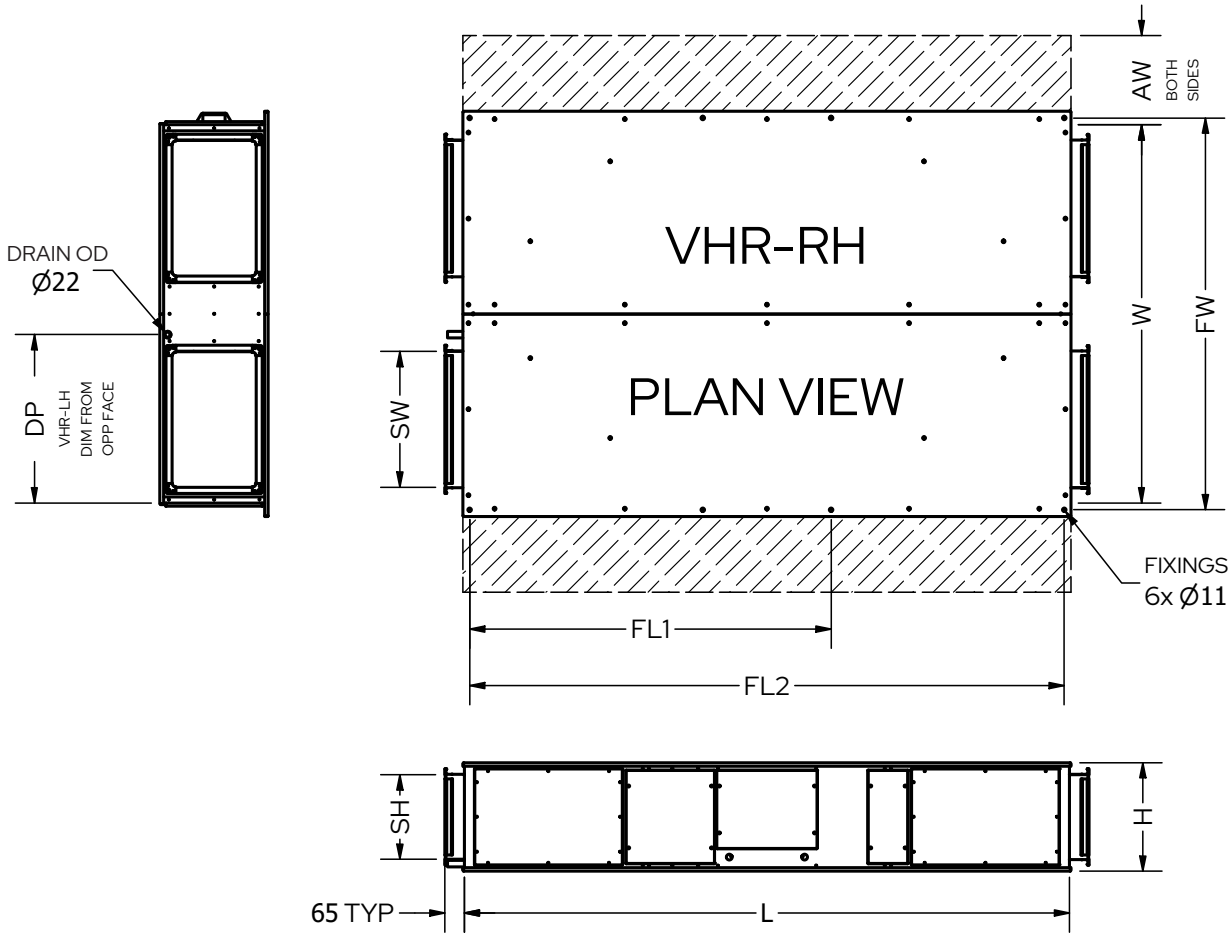

VHR DIMENSIONS											
	MAIN BODY			SPIGOT		MOUNTING			ACCESS	DRAIN	WEIGHT
VHR	L	W	H	SW	SH	FW	FL1	FL2	AW	DP	kg
50	890	590	250	Ø200		630	N/A	860	300	250	65
100	1390	750	270	200	190	795	N/A	1355	400	305	86
150	1725	975	300	300	220	1020	1058	1690	500	420	126
260	2000	1250	300	450	220	1295	1195	1965	600	557	175
300	2000	1250	360	450	280	1295	1195	1965	600	557	190
400	2000	1250	440	450	360	1295	1195	1965	600	557	200
500	2000	1250	550	450	480	1295	1195	1965	600	557	350

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VHR-CF Configurations:

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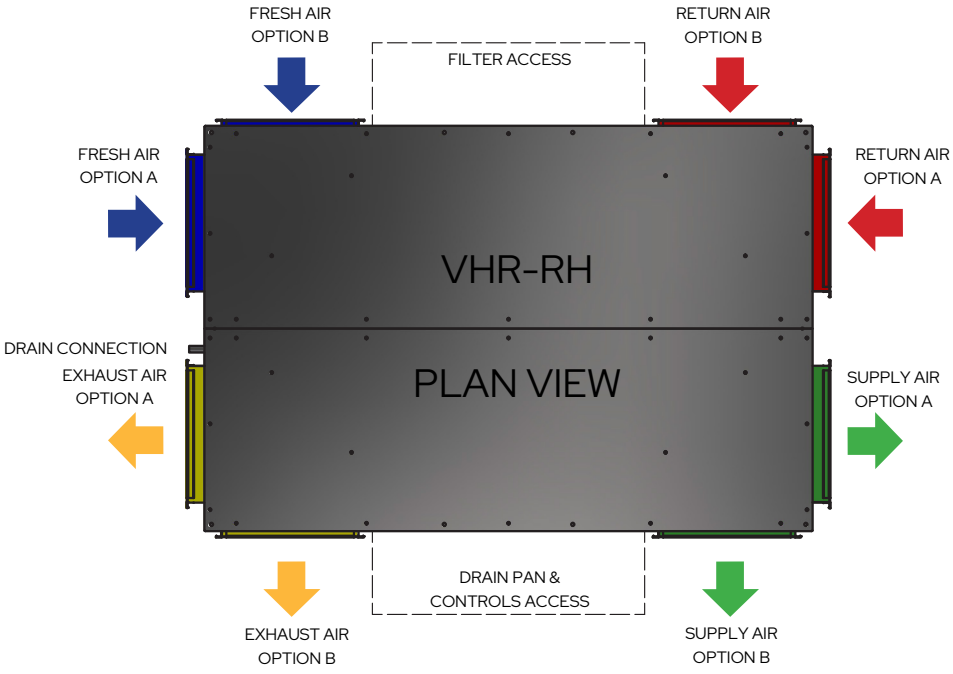

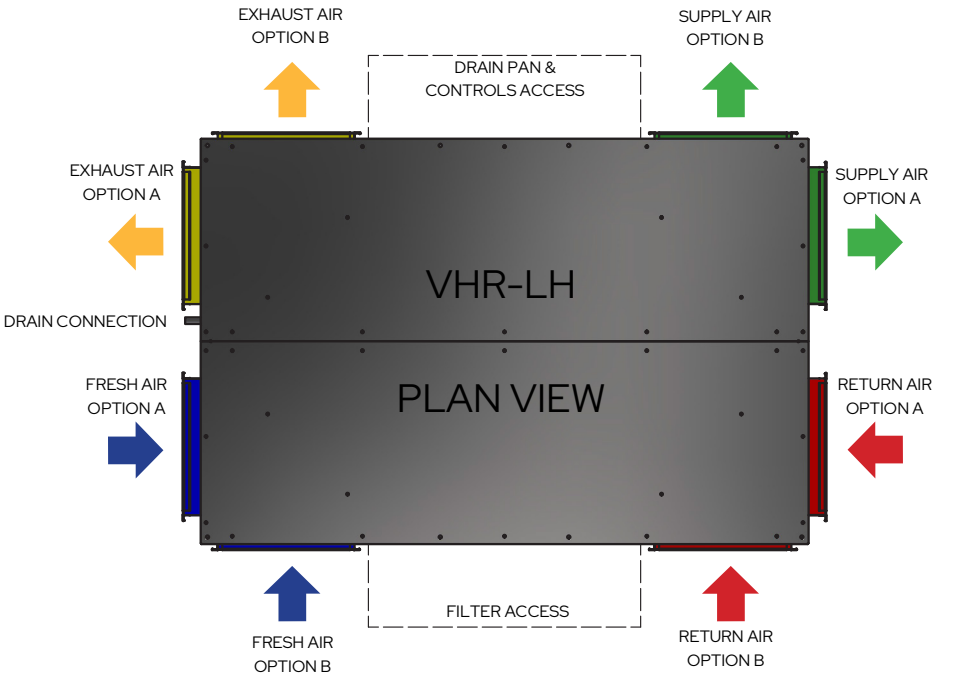

	HANDING (RH OR LH)	SPECIFIC LETTER	SPECIFIC LETTERS RELATE TO			
			FRESH AIR	SUPPLY AIR	RETURN AIR	EXHAUST AIR
1	RH	A	A	A	A	A
2	RH	B	A	A	A	B
3	RH	C	A	A	B	B
4	RH	D	A	B	B	B
5	RH	E	B	B	B	B
6	RH	F	B	B	B	A
7	RH	G	B	B	A	A
8	RH	H	B	A	A	A
9	RH	I	B	A	A	B
10	RH	J	A	B	B	A
11	RH	K	A	B	A	B
12	RH	L	B	A	B	A
13	RH	M	A	B	A	A
14	RH	N	B	A	B	B
15	RH	O	A	A	B	A
16	RH	P	B	B	A	B
17	RH	S	CUST' SPECIFIC			
			DIFFERENT FANS/ FILTERS ETC			

REFERENCE ORDER CODES
VHR-300-LHG
VHR-260-RHM

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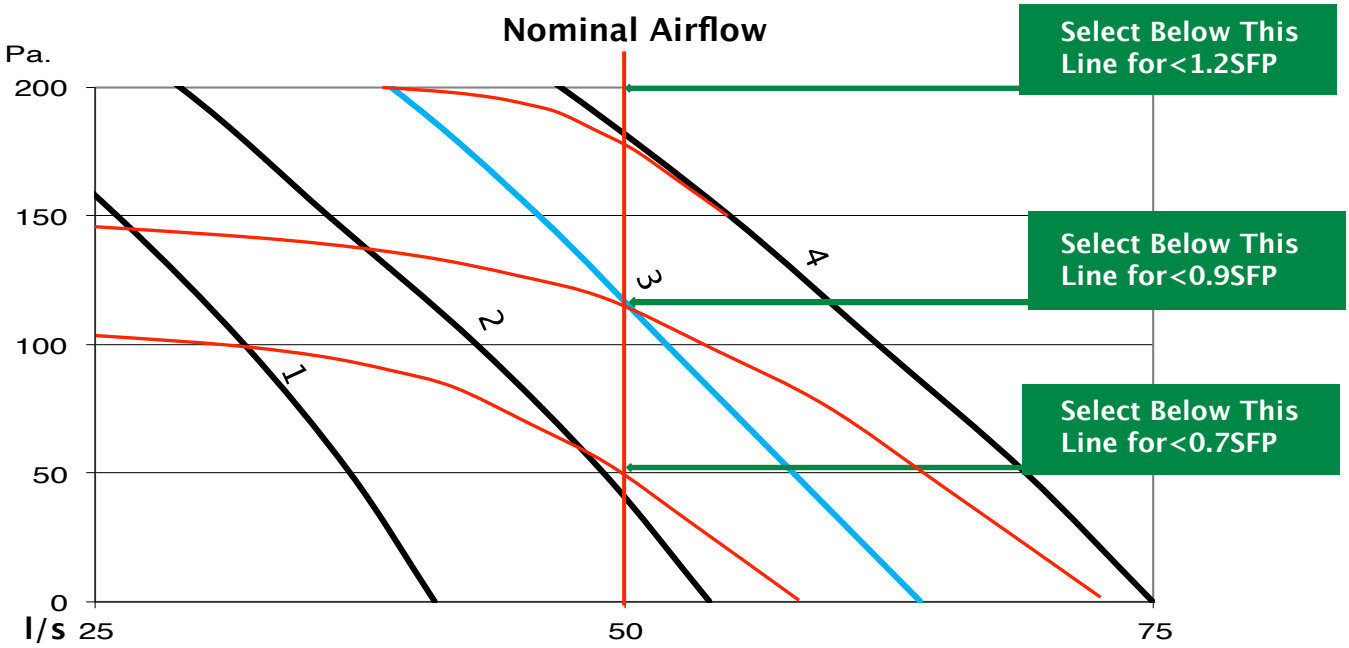

Note: Separate filter box for ePM2.5 (F7) filter is required for VHR-CF50 if selected. Allow additional 40Pa if selected.

VHR-CF 50 Airflow (l/s) vs Resistance (Pa)						
Selection	0	50	100	150	200	Voltage
Curve 1	40	37	32	27	15	5.0
Curve 2	54	49	43	36	29	6.0
Curve 3	64	58	52	46	39	7.0
Curve 4	75	69	62	55	48	8.0

VHR-CF50 In-Duct Sound Power Data dB (Ref. 10^{-12} W)										
		63	125	250	500	1k	2k	4k	8k	Breakout @3m (dBA)
Curve 1	S.A. / E.A.	50	53	53	52	52	51	49	44	23
Curve 1	F.A. / R.A.	45	48	48	47	47	46	44	39	
Curve 2	S.A. / E.A.	55	58	58	58	57	57	55	50	27
Curve 2	F.A. / R.A.	50	53	53	53	52	52	50	45	
Curve 3	S.A. / E.A.	57	59	59	59	58	59	57	52	28
Curve 3	F.A. / R.A.	52	54	54	54	52	54	52	47	
Curve 4	S.A. / E.A.	59	61	61	61	60	61	59	54	30
Curve 4	F.A. / R.A.	54	56	56	56	55	56	54	49	

VHR-CF100

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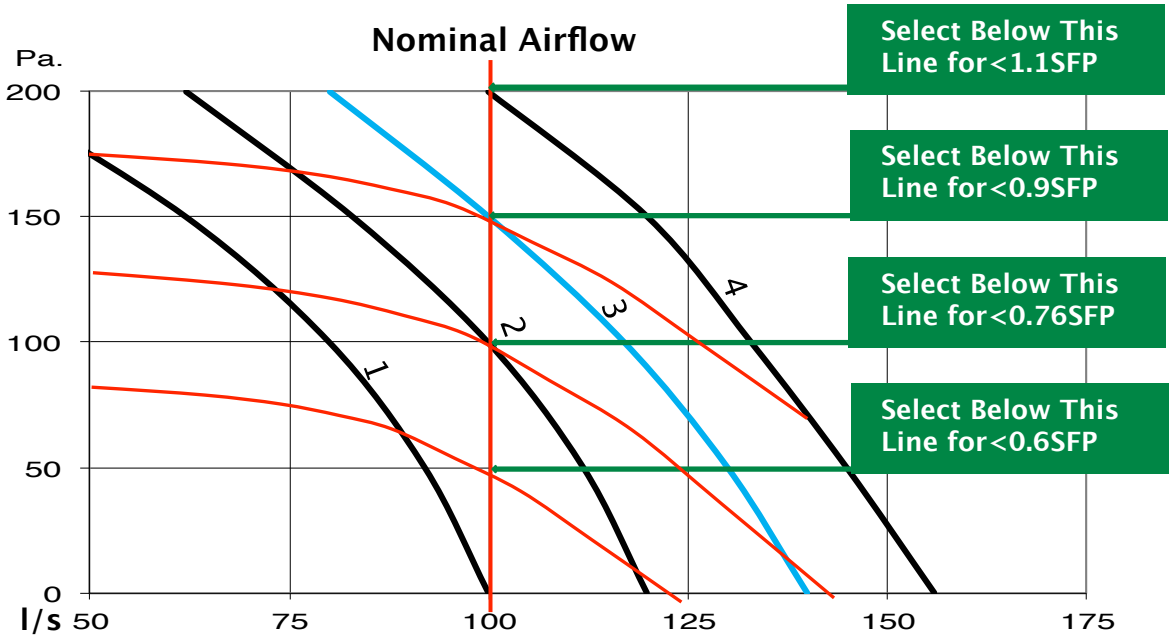

Note: Allow additional 40Pa. For ePM2.5 (F7) Filter (if selected)

VHR-CF 100 Airflow (l/s) vs Resistance (Pa)						
Selection	0	50	100	150	200	Voltage
Curve 1	100	92	80	62	37	5.0
Curve 2	120	112	100	83	62	6.0
Curve 3	140	130	117	100	80	7.0
Curve 4	156	145	133	120	100	8.0

VHR-CF100 In-Duct Sound Power Data dB (Ref. 10^{-12} W)										
		63	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Breakout @3m (dBA)**
Curve 1	S.A. / E.A.	52	53	54	54	54	53	51	50	22
Curve 1	F.A. / R.A.	49	50	51	51	51	50	48	47	
Curve 2	S.A. / E.A.	55	56	57	57	57	56	54	53	25
Curve 2	F.A. / R.A.	52	53	54	54	54	53	51	50	
Curve 3	S.A. / E.A.	57	58	59	59	59	59	56	55	27
Curve 3	F.A. / R.A.	54	55	56	56	56	56	53	52	
Curve 4	S.A. / E.A.	59	60	61	61	61	61	58	57	29
Curve 4	F.A. / R.A.	56	57	58	58	58	58	55	54	

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VHR-CF150

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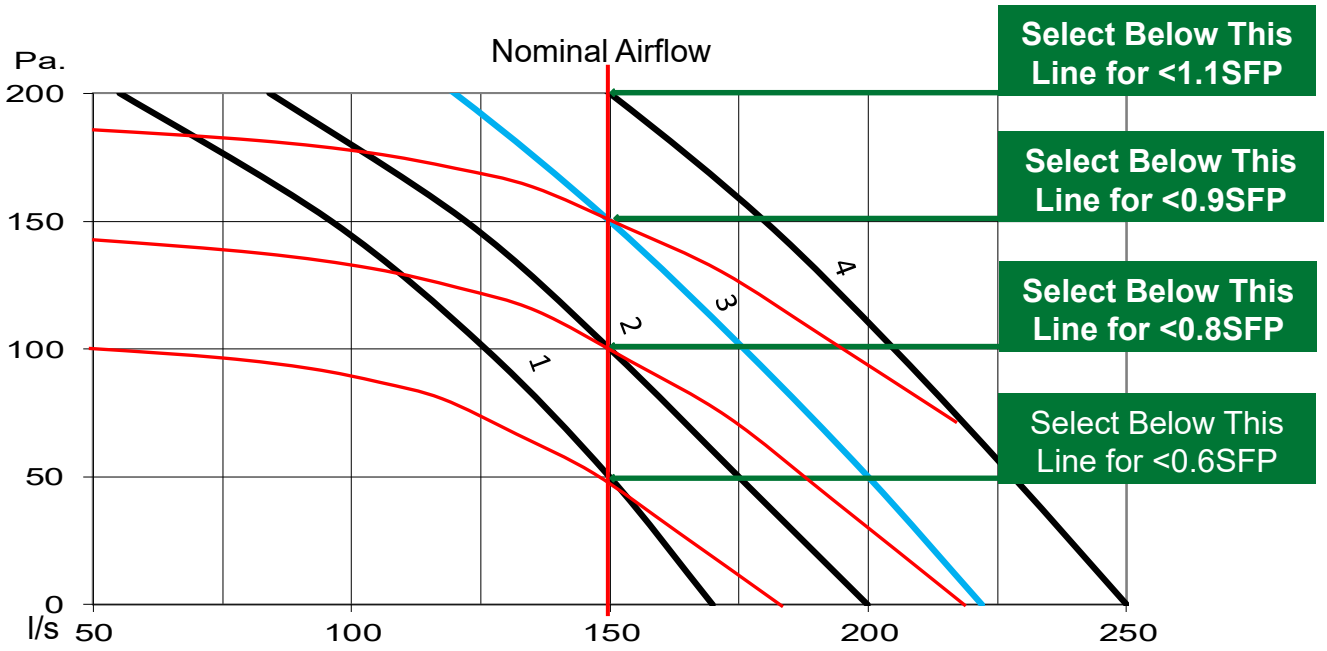

Note: Allow additional 40Pa. For ePM2.5 (F7) Filter (if selected)

VHR-CF 150 Airflow (l/s) vs Resistance (Pa)						
Selection	0	50	100	150	200	Voltage
Curve 1	170	150	126	96	55	5.0
Curve 2	200	175	150	122	84	6.0
Curve 3	222	200	176	150	120	7.0
Curve 4	250	228	205	180	150	8.0

VHR-CF150 In-Duct Sound Power Data dB (Ref. 10^{-12} W)										
		63	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**Breakout @3m (dBA)**
Curve 1	S.A. / E.A.	56	60	60	55	55	55	48	44	27
Curve 1	F.A. / R.A.	54	58	58	53	53	53	46	42	
Curve 2	S.A. / E.A.	58	62	62	57	58	59	50	46	30
Curve 2	F.A. / R.A.	56	60	60	55	56	57	48	44	
Curve 3	S.A. / E.A.	60	64	64	59	60	61	52	48	32
Curve 3	F.A. / R.A.	58	62	62	57	58	59	50	46	
Curve 4	S.A. / E.A.	61	65	64	60	61	62	54	50	34
Curve 4	F.A. / R.A.	59	63	62	58	59	60	52	48	

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VHR-CF260

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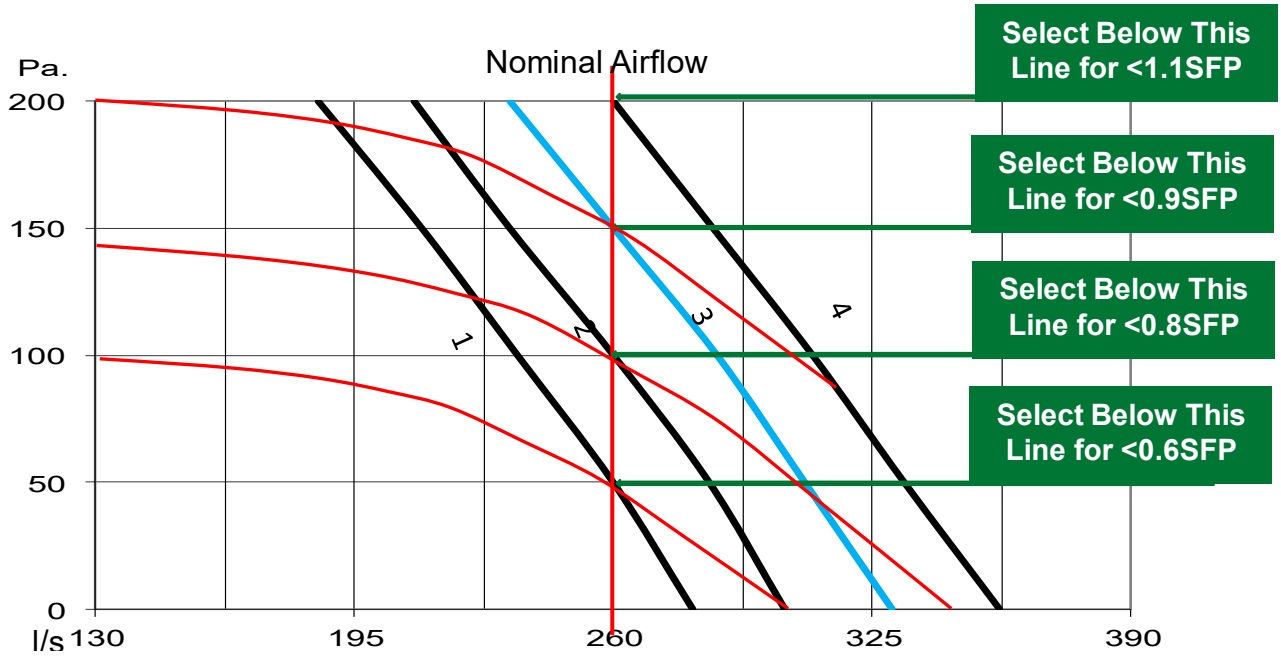
ULTRA LOW PROFILE DESIGN



Note: Allow additional 40Pa. For ePM2.5 (F7) Filter (if selected)

VHR-CF 260 Airflow (l/s) vs Resistance (Pa)						
Selection	0	50	100	150	200	Voltage
Curve 1	280	260	236	212	186	5.0
Curve 2	303	284	260	234	210	6.0
Curve 3	330	308	286	260	234	7.0
Curve 4	357	333	310	285	260	8.0

VHR-CF260 In-Duct Sound Power Data dB (Ref. 10^{-12} W)										
		63	125	250	500	1k	2k	4k	8k	Breakout @3m (dBA)
Curve 1	S.A. / E.A.	56	60	60	55	55	55	48	44	28
Curve 1	F.A. / R.A.	54	58	58	53	53	53	46	42	
Curve 2	S.A. / E.A.	58	63	63	58	59	60	51	46	30
Curve 2	F.A. / R.A.	56	61	61	56	57	58	49	44	
Curve 3	S.A. / E.A.	60	65	63	62	63	62	56	54	33
Curve 3	F.A. / R.A.	57	62	60	59	60	59	53	51	
Curve 4	S.A. / E.A.	61	65	64	60	61	62	54	50	35
Curve 4	F.A. / R.A.	59	63	62	58	59	60	52	48	

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VHR-CF300

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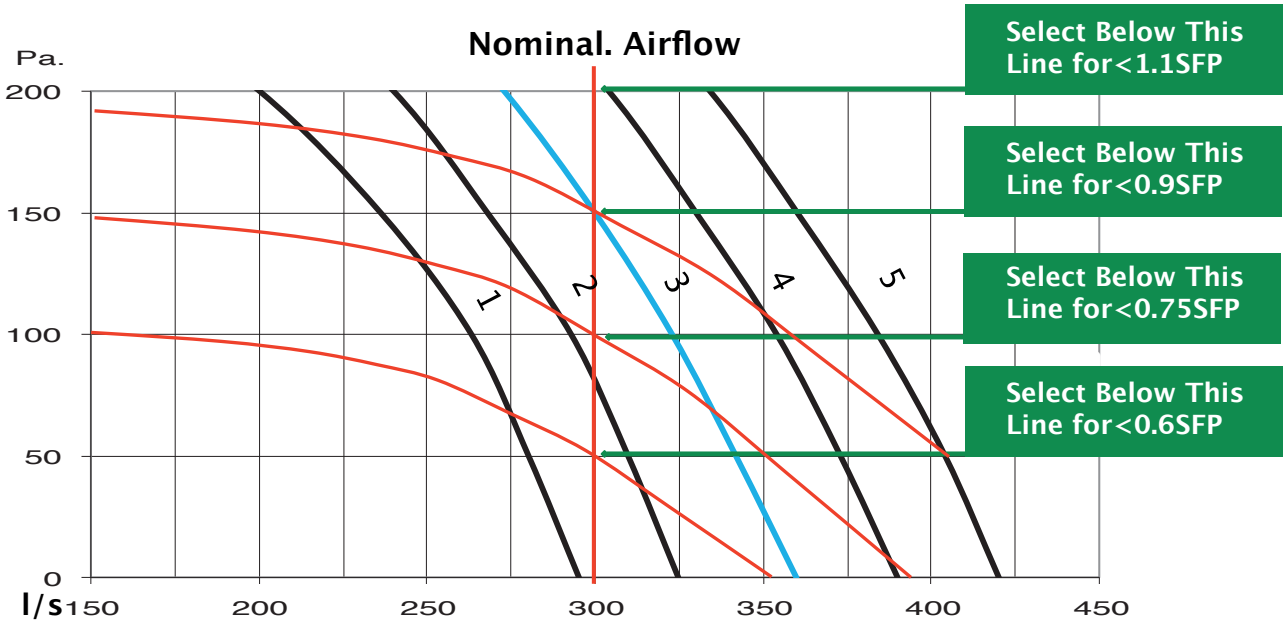

Note: Allow additional 40Pa. For ePM2.5 (F7) Filter (if selected)

VHR-CF 300 Airflow (l/s) vs Resistance (Pa)							
Selection	0	50	100	150	200	250	Voltage
Curve 1	295	280	263	236	200	150	5.0
Curve 2	325	310	293	268	240	200	6.0
Curve 3	360	342	323	300	273	240	7.0
Curve 4	390	373	354	330	304	270	8.0
Curve 5	420	404	384	360	334	300	9.0

VHR-CF300 In-Duct Sound Power Data dB (Ref. 10^{-12} W)										
		63	125	250	500	1k	2k	4k	8k	Breakout @3m (dBA)
Curve 1	S.A. / E.A.	53	63	60	60	60	60	54	53	30
Curve 1	F.A. / R.A.	52	61	58	58	58	58	52	51	
Curve 2	S.A. / E.A.	55	65	62	62	62	62	56	55	32
Curve 2	F.A. / R.A.	54	64	60	57	57	60	51	52	
Curve 3	S.A. / E.A.	57	67	64	64	64	64	58	57	34
Curve 3	F.A. / R.A.	56	66	62	59	59	62	53	54	
Curve 4	S.A. / E.A.	59	69	66	66	66	66	60	59	36
Curve 4	F.A. / R.A.	58	68	64	61	61	64	55	56	
Curve 5	S.A. / E.A.	61	71	68	68	68	68	62	61	38
Curve 5	F.A. / R.A.	60	70	66	63	63	66	57	58	

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VHR-CF400

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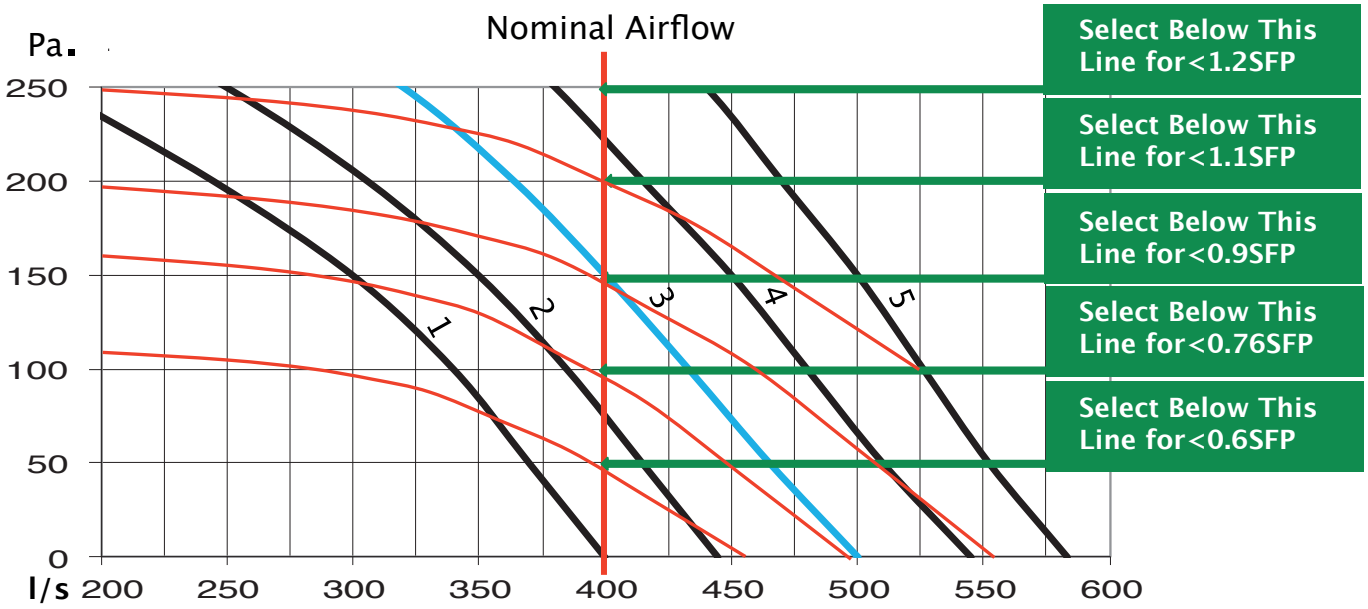

Note: Allow additional 40Pa. For ePM2.5 (F7) Filter (if selected)

VHR-CF 400 Airflow (l/s) vs Resistance (Pa)							
Selection	0	50	100	150	200	250	Voltage
Curve 1	400	370	340	300	245	180	5.0
Curve 2	445	415	385	350	306	250	6.0
Curve 3	500	465	433	400	364	320	7.0
Curve 4	545	510	480	450	415	380	8.0
Curve 5	583	552	526	500	470	440	9.0

VHR-CF400 In-Duct Sound Power Data dB (Ref. 10^{-12} W)										
		63	125	250	500	1k	2k	4k	8k	Breakout @3m (dBA)
Curve 1	S.A. / E.A.	48	61	50	58	59	56	49	44	27
Curve 1	F.A. / R.A.	45	58	47	55	56	53	46	41	
Curve 2	S.A. / E.A.	50	63	52	60	61	58	51	46	29
Curve 2	F.A. / R.A.	47	60	49	57	58	55	48	43	
Curve 3	S.A. / E.A.	52	65	54	62	63	60	53	48	31
Curve 3	F.A. / R.A.	49	62	51	59	60	57	50	45	
Curve 4	S.A. / E.A.	54	67	56	64	65	62	55	50	33
Curve 4	F.A. / R.A.	51	64	53	60	62	59	52	47	
Curve 5	S.A. / E.A.	56	69	58	66	67	64	57	52	35
Curve 5	F.A. / R.A.	53	66	55	63	64	61	54	49	

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VHR-CF500

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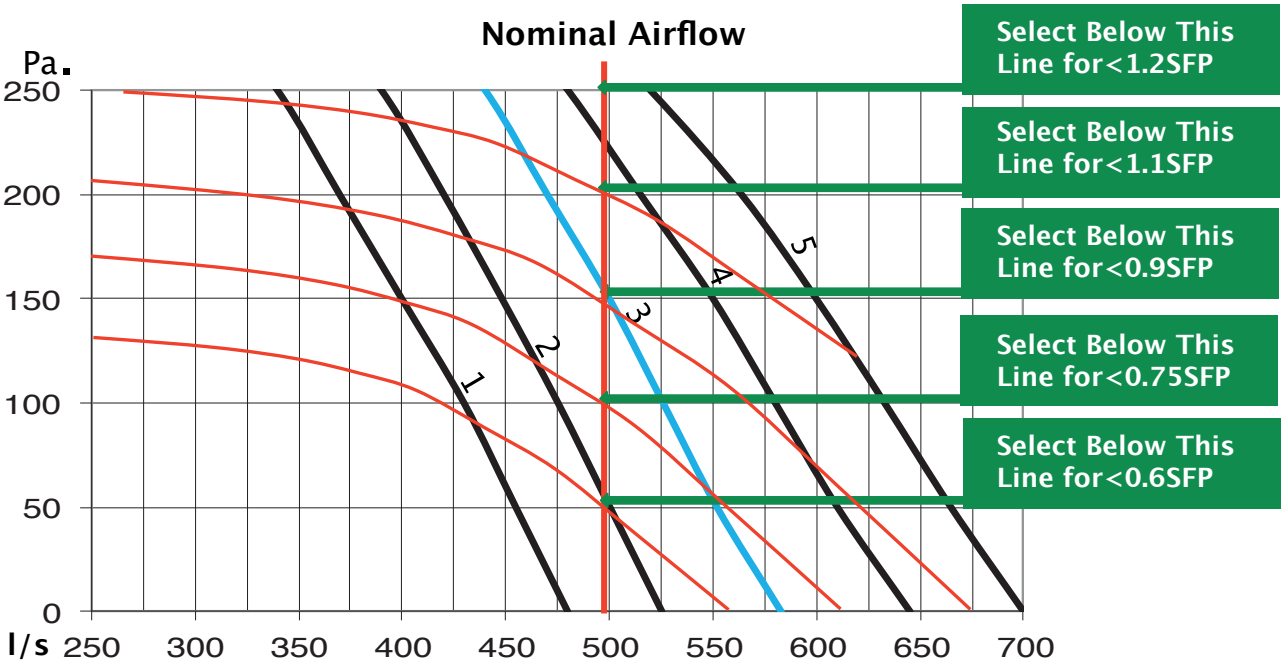

Note: Allow additional 40Pa. For ePM2.5 (F7) Filter (if selected)

VHR-CF 500 Airflow (l/s) vs Resistance (Pa)							
Selection	0	50	100	150	200	250	Voltage
Curve 1	480	455	430	400	370	340	5.0
Curve 2	525	500	475	448	420	390	6.0
Curve 3	583	552	526	500	470	440	7.0
Curve 4	645	610	580	550	515	480	8.0
Curve 5	700	665	633	600	564	520	9.0

VHR-CF500 In-Duct Sound Power Data dB (Ref. 10^{-12} W)										
		63	125	250	500	1k	2k	4k	8k	Breakout @3m (dBA)
Curve 1	S.A. / E.A.	50	63	56	60	61	58	51	46	29
Curve 1	F.A. / R.A.	47	60	53	57	58	55	48	43	
Curve 2	S.A. / E.A.	52	65	58	62	63	60	53	48	31
Curve 2	F.A. / R.A.	49	62	55	59	60	57	50	45	
Curve 3	S.A. / E.A.	54	67	60	64	65	62	55	50	33
Curve 3	F.A. / R.A.	51	64	57	61	62	59	52	47	
Curve 4	S.A. / E.A.	56	69	62	66	67	64	57	52	35
Curve 4	F.A. / R.A.	53	66	59	63	64	61	54	49	
Curve 5	S.A. / E.A.	58	71	64	68	69	66	59	54	37
Curve 5	F.A. / R.A.	55	68	61	65	66	63	56	51	

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VHR-CF Attenuators

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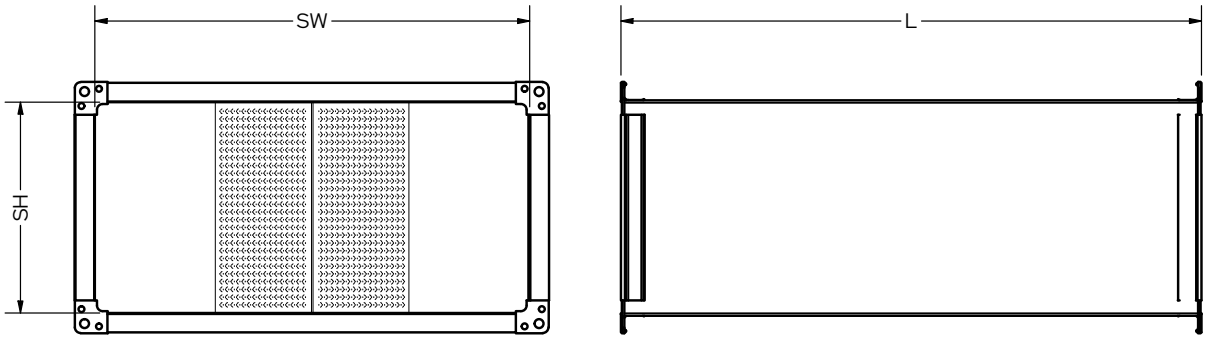


MEZ 20 FLANGES

ATTENUATOR DIMENSIONS					
VHR	**SW**	**SH**	**LENGTHS**	**AIRFLOW (l/s)**	**A.P.D (Pa)**
50	Ø200		600 / 900 / 1200	50	7
100	200	190	600 / 900 / 1200	100	15
150	300	220	600 / 900 / 1200	150	12
260	450	220	600 / 900 / 1200	260	16
300	450	280	600 / 900 / 1200	300	14
400	450	360	600 / 900 / 1200	400	15
500	450	480	600 / 900 / 1200	500	14

FRESH AIR / SUPPLY AIR / RETURN AIR / EXHAUST AIR

VHR-CF Attenuator Insertion Losses:									
Length	**Hz.**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**
600	dB	3	6	9	17	22	22	15	11
900		4	9	14	25	35	36	22	15
1200		5	11	17	31	46	49	28	18

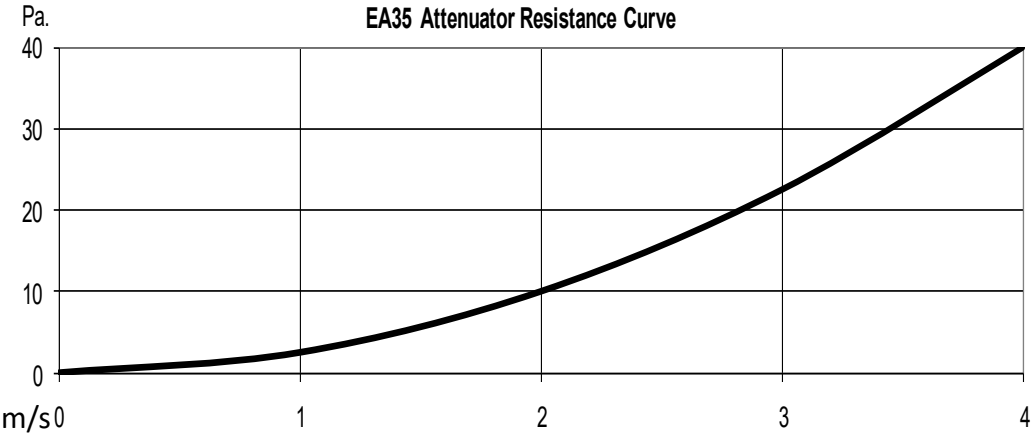
Specification – Eco-Airvent VHR-CF Attenuators

CASEWORK (duct section), shall be manufactured from high grade 1.0mm or 1.2mm galvanised sheet steel with lock-formed seams.

FLANGES shall be Mez. 20 riveted into position unless otherwise specified.

INFILL shall be **Zero ODP** (Ozone Depletion Potential) **Zero GWP** (Global Warming Potential) odourless, non hygroscopic, rot proof, does not sustain vermin and will not encourage growth of fungi, mould or bacteria. Euroclass A1 to BS EN ISO 13501-1Free from CFC, HFC, dye or artificial colour and shall be lined.

SPLITTERS & SIDELINERS: shall be of enhanced aerodynamic formation allowing greater sound absorbtion with greatly reduced resistance to airflow.



VHR-CF
Unit Technical Data:

Eco-Airvent Limited
Unit A6 Stirling Business Park
4-6 Nimrod Way
Ferndown Industrial Estate
Wimborne BH21 7SH
Tel: +44 (0) 1202 069970
Email: sales@eco-airvent.co.uk

ECO-AIRVENT™

Made in the UK

Electrical & Technical Data@230V/1ph/50Hz					
VHR-CF	Max. Watts	Max. Amps	TOTAL SFP (W/l/s)	% Heat Reclaim *	Max. Condensate (l/hr)
50	45	2	0.9	80	0.8
100	90	2	0.9	82	1.5
150	120	2	0.9	85	2.4
260	170	4	0.9	90	4.4
300	180	6	0.9	90	5.2
400	300	6	0.9	90	6.8
500	330	6	0.9	90	8.5

*Heat reclaim at nominal airflow: Cold Side E.A.T. -4°C/98% RH Hot Side E.A.T. 22°C/60% RH

VHR-CF Specification:

General:
VHR-CF Heat Recovery Units shall be manufactured from high quality galvanized sheet steel with stainless steel drain trays, acoustic, non-hygroscopic class 'O' CFC & HFC-free, open cell expanded foam for thermal and acoustic insulation, fully compliant with London Boroughs and CAA flammability & toxicity requirements.

Fans:
Non-overloading, 100,000 hour life expectancy, low energy IP54 motor protection class, (maximum ambient 60°C), EC fans with sealed-for-life bearings individually mounted for ease of removal shall be fitted.

S.F.P.
VHR-CF Heat Recovery Units shall achieve <0.9W/l/s installed performance at recommended maximum pressure and airflow.

Operation:
VHR-CF units shall offer low noise, high heat recovery efficiency from aluminium heat exchanger, very low energy input, very low maintenance and low dimensional profile while maintaining a full summer bypass facility and the ability to allow 50% turn-down of airflow while retaining up to 90% temperature efficiency.

Filters:
Low energy ISO16890-1:2016 Coarse (G4) filters shall be fitted as standard to reduce maintenance requirement, in typical situations, to 1 – 2 years. Filter access shall be via removable panels and an ISO16890-1:2016ePM2.5 (F7) filter option shall be available on supply-air side for inner-city locations.

Configurations:
Units shall offer four interchangeable spigot configurations as standard to suit site ductwork layouts.

Control:
ECO-PRO4 controller shall be fitted as standard, offering: automated summer bypass, individual supply & extract fan speed adjustment and optional touch screen user control. Optional CO^2 Control.

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