

RAE

- > Attenuated Circular VAV
- > Elliptical Damper
- > Extract Unit

DESCRIPTION

Our compact VAV units comprise of galvanised casing with continuous laser welded seal and contain an integral attenuator, low noise air tight oval air damper and Diff-cross™ airflow averaging grid.

The unit is designed to stop leakage using unique elliptical damper blades with rubber seals and nylon bearings.

STANDARDS

- Casing tight shut off to EN 1751 Class C
- Spigots to EN 1506 or 13180, swaged to EN 1506:2006 & 2007
- Damper blade rubber seal leakage exceeds EN 1751 Class 3

CONSTRUCTION

Galvanised steel

Options:

- Attenuator POD
- Polyester Powder Coating

MODELS

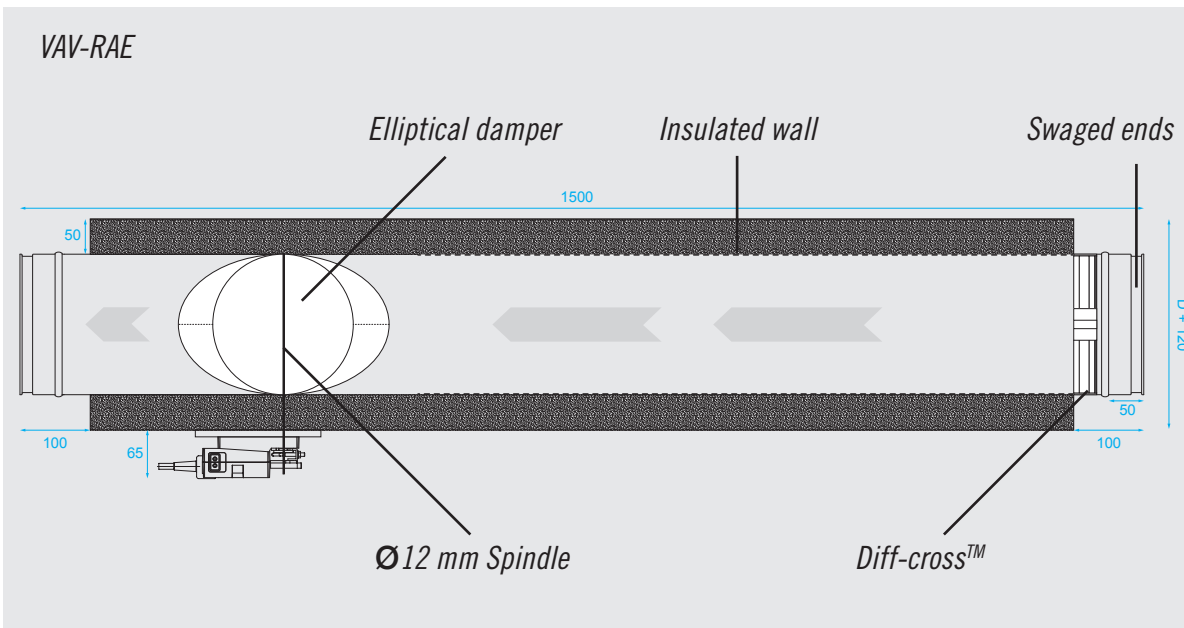
- VAV-RS:** Circular single wall
- VAV-RD:** Circular double wall
- VAV-RAS:** Circular attenuated supply
- VAV-RAE:** Circular attenuated extract

RADIATED SOUND

Radiated sound allowance according to VDI2081 is 5dB/oct for room attenuation and 4dB/oct for ceiling attenuation total 9dB/oct. Double wall radiated figures are based on duct work being acoustically lagged 3 m either side of the unit.

NOTES

Minimum velocity 1.0 m/s. Controller actuator included. All dimensions are given in mm. Requires 3x diameter straight approach for effective operation.



DIMENSIONAL DATA (mm)	
Ø Dia.	Length
100	1500
125	1500
160	1500
200	1500
250	1500
315	1500
355	1500
400	1500

POD available for 250, 315, 355 and 400 sizes.

DISCHARGE SOUND ALLOWANCE						
Calculated according to VDI 2081						
Hz	125	250	500	1K	2K	4K
dB	10	8	7	8	8	8

DISCHARGE SOUND ALLOWANCE										
Calculated according to VDI 2081										
l/s	139	278	417	556	695	834	1111	1389	1667	
dB/oct	0	3	5	6	7	8	9	10	11	

RAE – SELECTION DATA

SUPPLY SELECTION DATA									
Ø 100 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	15	2	--	--	--	--	--	23
4	29	10	--	21	24	--	--	25	
6	44	23	23	26	29	--	22	28	
8	59	41	28	30	35	--	24	31	
10	74	65	32	34	37	22	27	33	

SUPPLY SELECTION DATA									
Ø 125 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa (+ASK)	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	23	2	--	--	23	--	--	24
4	47	10	22	25	28	--	--	27	
6	70	22	26	30	33	--	23	30	
8	93	39	31	33	38	--	25	33	
10	117	61	35	36	41	24	28	35	

Ø 160 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	39	2	--	22	28	--	--	26
4	78	10	25	27	34	--	22	30	
6	116	21	30	33	38	--	25	32	
8	155	37	34	37	42	22	28	35	
10	194	57	37	40	44	25	31	37	

Ø 200 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa (+ASK)	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	61	2	20	25	32	--	--	27
4	122	9	28	31	38	--	24	31	
6	183	18	32	36	42	--	28	33	
8	244	33	36	40	45	23	30	36	
10	305	51	37	40	45	27	33	38	

Ø 250 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	96	2	22	27	36	--	--	27
4	192	9	30	37	42	--	26	32	
6	287	17	31	36	44	22	29	36	
8	383	29	36	40	46	26	32	38	
10	479	46	38	4	46	29	35	40	

Ø 315 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa (+ASK)	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	153	3	23	30	39	--	--	27
4	306	14	28	35	41	--	27	31	
6	459	15	31	37	44	22	29	36	
8	611	26	34	39	45	25	33	38	
10	764	41	37	42	47	29	36	41	

Ø 355 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	194	2	25	30	41	--	--	29
4	389	10	30	36	42	--	28	33	
6	584	14	32	37	45	24	30	37	
8	778	25	36	40	45	28	34	39	
10	973	38	38	42	47	31	37	43	

Ø 400 mm	Size			Discharge Sound			Radiated Sound		
	VEL m/s	VOL l/s	Min Δ Ps Pa (+ASK)	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
	2	248	2	26	31	43	--	--	31
4	495	10	29	35	42	--	28	35	
6	742	13	33	37	44	26	31	39	
8	990	23	36	40	45	30	35	41	
10	1237	36	39	42	47	33	38	43	

KEY INFORMATION

100 Pa 200 Pa 400 Pa System Static Pressure. Discharge and Radiated Sound (LpA)

VEL = Velocity in (m/s)

VOL = Volume in (l/s)