

VSR



Application

Single duct VAV (Variable-Air-Volume) terminals are commonly used to maintain a constant space temperature by varying the conditioned air volume to the space. If the space temperature raises above the set point, the primary air damper modulates open to supply more (cold) primary air into the space so that the required space temperature is maintained. As the space temperature drops below set point, the VAV terminal modulates to a pre-set minimum airflow, which is usually determined by the minimum level of ventilation required in the space. Should the space cooling loads drop even further at the minimum airflow setting, a reheat coil (hot water or electric) can be energized to provide further heating.

Single duct VAV terminals can also be used to maintain a constant (positive or negative) room pressure and to control the carbon dioxide (CO₂) level in the room.



Type AZVSR-SW-BE1 (Belimo LMP-D3-MP controller)

Design features

Casing

- Ridged galvanised steel construction (1,0mm or 20 gauge).
- Spigots comply with DIN 24145 or DIN 24146.
- Oval shaped damper blade, sandwich construction with synthetic rubber seals. Leakage rate 0.25% of V_{nom} @ 750Pa (3"WG) static pressure drop.
- Air leakage flow complies with Class II, VDI 3803 or DIN 24194, Part 2
- Damper shaft aluminium, ø12 mm
- Bearings Polyamide (PA6.6)
- Thermal / acoustical insulation 25kg/m³ (1,5lb/cuFt) non-fibrous or fiberglass, fire resistant to BS-476 Class "O". Exposed edges are sealed from the air-stream with solid metal lining.
- Operating temperature +5 to 50°C
- Storage temperature 0 to +70°C, max R.H. 95%
- Other construction available upon request.



Type AZVSR-SAS-BE1 with integral sound attenuator

Air flow sensor

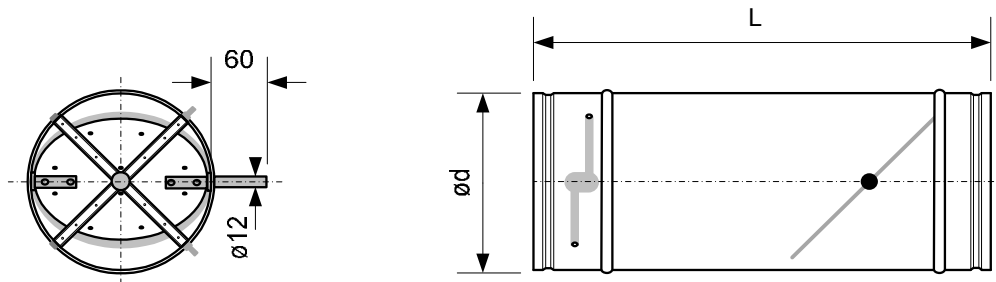
- The unique shape, patent pending, creates a linear amplified signal (at least 2.5x P_{dyn}) with a very low pressure drop and noise level.
- Multi point averaging according to the "Log-Tchebycheff" method
- 1% (FS) accuracy with 3xD_{eq} straight duct approach
- 5% (FS) accuracy with 1xD_{eq} straight duct approach
- Stable measuring signal from 0,7 m/s air velocity



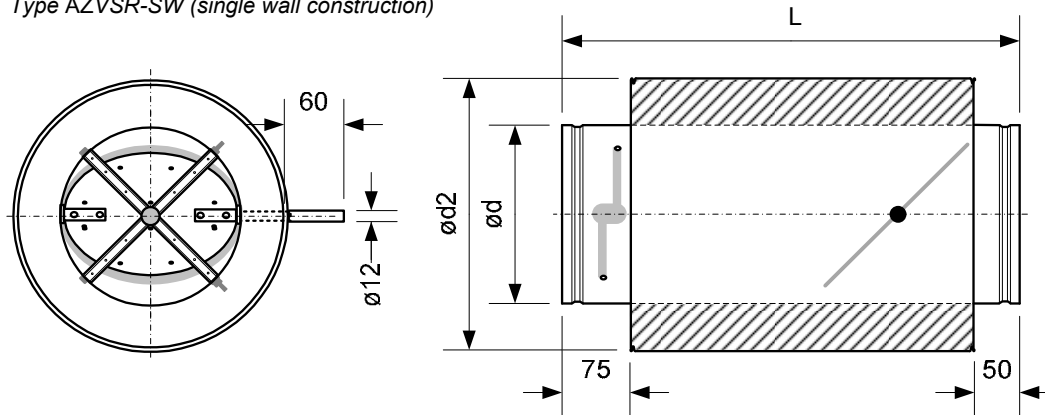
Detail FloXact-X® multipoint, averaging air flow sensor

Kv Values FloXact-X®

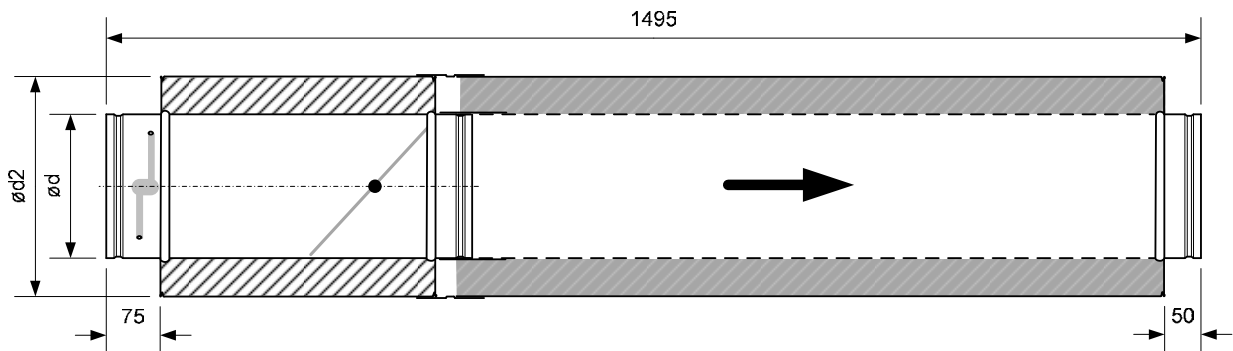
	units	100	125	160	200	250	315	355	400	450	500
Kv Value	l/s/Pa	5,23	8,89	15,6	25,5	41,3	67,5	86,8	111,3	142,2	176,8
	m ³ /h/Pa	18,8	32,0	56,2	91,9	148,8	243,0	312,3	400,7	511,8	636,5
V _{nom} @ 150Pa	l/s	64	109	191	313	506	827	1.063	1.363	1.741	2.165
	m ³ /h	231	392	688	1.125	1.822	2.976	3.825	4.908	6.268	7.795
V _{nom} @ 250Pa (1"WC)	l/s	83	141	247	404	653	1.067	1.372	1.760	2.248	2.795
	m ³ /h	298	506	888	1.453	2.352	3.842	4.938	6.336	8.093	10.064



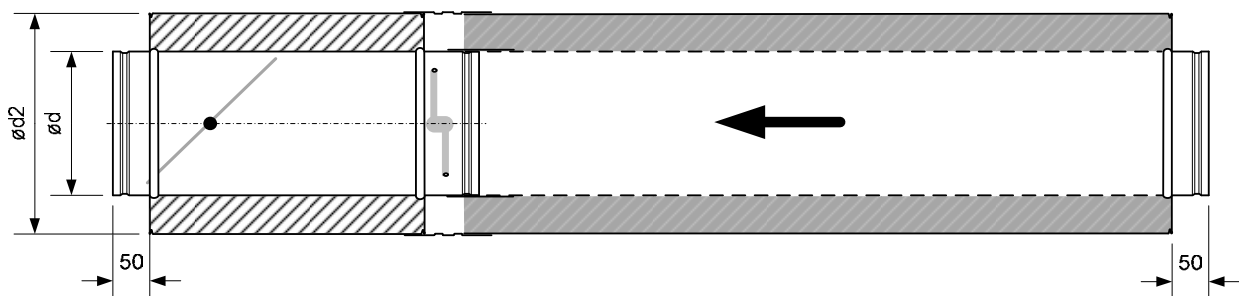
Type AZVSR-SW (single wall construction)



Type AZVSR-DW (double wall construction)



Type AZVSR-SAS (supply air)



Type AZVSR-SAR (return/extract air)

Dimensions and weight (without controls)

		100	125	160	200	250	315	355	400	450	500
$\varnothing d$	mm	$\varnothing 98$	$\varnothing 123$	$\varnothing 158$	$\varnothing 198$	$\varnothing 248$	$\varnothing 313$	$\varnothing 353$	$\varnothing 398$	$\varnothing 448$	$\varnothing 498$
$\varnothing d2$	mm	$\varnothing 200$	$\varnothing 225$	$\varnothing 260$	$\varnothing 300$	$\varnothing 350$	$\varnothing 415$	$\varnothing 455$	$\varnothing 500$	$\varnothing 550$	$\varnothing 600$
L	mm	500	500	500	500	500	500	500	500	550	600
AZVSR-SW	Kg	1,1	1,4	1,9	2,5	3,3	4,5	5,3	6,2	6,7	8,9
AZVSR-DW	Kg	3,0	3,6	4,4	5,4	6,8	8,6	9,8	11,3	12,2	15,0
AZVSR-SAx	Kg	7,3	7,9	9,4	11,2	13,5	16,6	18,6	20,9	x	x

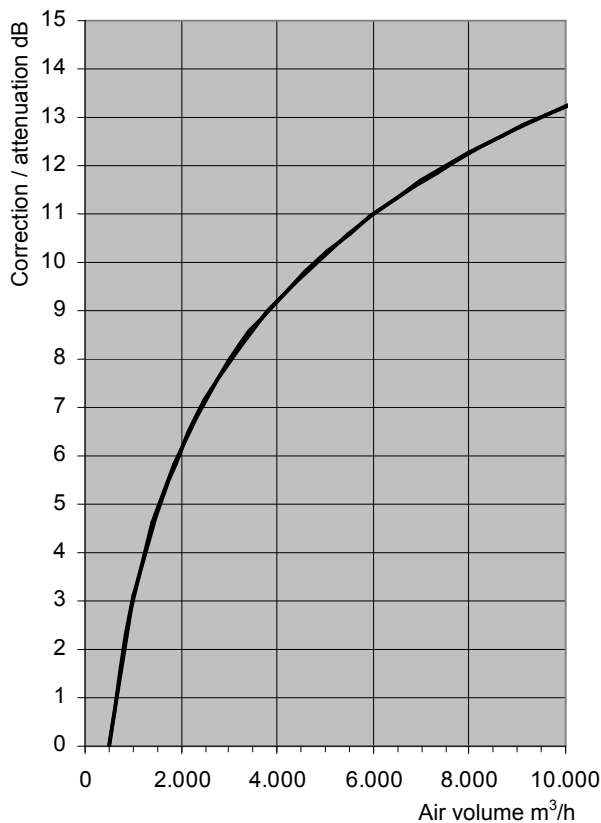


Sound data dB(A) and NR

- The discharge sound pressure levels **Lp(A)**, are determined with a room absorption of 7dB/oct and the following assumption for downstream ductwork, diffuser(s) and end reflection:

125	250	500	1k	2k	4k	Hz
-3	-5	-10	-15	-15	-12	dB

- The discharge sound pressure levels **Lp(A)** also include a correction for air volume :



- The Radiated sound pressure levels **Lp(A)** are determined with a room absorption of 7dB/oct and the following assumption ceiling attenuation:

125	250	500	1k	2k	4k	Hz
-1	-3	-5	-7	-7	-10	dB

- Sound data is measured in a reverberation room at an independent sound laboratory, according to ISO-3741 and ISO-5135 standards.
- L_w in dB/Oct are sound power levels (re $10^{-12}W$) per octave band in dB for discharge sound and radiated sound. Values less than 17 dB are indicated by "-".
- n/a Not applicable, static pressure < unit resistance
- min ΔPs.** Unit resistance with fully opened damper blade

Sound data NC

- The sound pressure levels **Lp(A)**, are determined with the following attenuation factors according to the guidelines in **ARI-885-98**

- The discharge sound pressure levels include:

> Environmental effect

125	250	500	1k	2k	4k	Hz
-3	-2	-1	-1	-1	-1	dB

> Duct lining, 5 feet, 1" lining (1.5m, 25mm thick)

125	250	500	1k	2k	4k	Hz
-1	-3	-8	-21	-20	-12	dB

> End Reflection

125	250	500	1k	2k	4k	Hz
-11	-6	-2	0	0	0	dB

> Acoustical flexible duct. 5 ft 8" (1.5m ø200mm)

125	250	500	1k	2k	4k	Hz
-6	-10	-17	-19	-19	-12	dB

> Room effect. 3000 cu ft, 10 ft from source.

125	250	500	1k	2k	4k	Hz
-9	-10	-11	-12	-13	-14	dB

> Discharge sound total reduction in dB:

125	250	500	1k	2k	4k	Hz
-30	-31	-39	-53	-53	-39	dB

- The Radiated sound pressure levels include:

> Environmental effect

125	250	500	1k	2k	4k	Hz
-3	-2	-1	-1	-1	-1	dB

> Ceiling effect. Mineral fibre 5/8" 20 lb/cu ft

125	250	500	1k	2k	4k	Hz
-9	-10	-12	-14	-15	-15	dB

> Room effect. 3000 cubic ft, 10 ft from source.>

125	250	500	1k	2k	4k	Hz
-9	-10	-11	-12	-13	-14	dB

> Radiated sound total reduction in dB:

125	250	500	1k	2k	4k	Hz
-21	-22	-24	-27	-29	-30	dB

- Sound data is measured in a reverberation room at an independent sound laboratory, according to ISO-3741 and ISO-5135 standards.
- L_w in dB/Oct are sound power levels (re $10^{-12}W$) per octave band in dB for discharge sound and radiated sound. Values less than 17 dB are indicated by "-".
- n/a Not applicable, static pressure < unit resistance
- min ΔPs.** Unit resistance with fully opened damper blade



Pressure drop over unit : 100 Pa

Model	Air Volume				Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)									
	Air Vel.					Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			
		mm	m/s	m ³ /h		l/s	CFM	Pa	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)
100	0,7	19	5	11	0	25	28	28	24	23	21	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	80	22	47	4	40	39	38	34	29	27	23	-	-	-	26	22	22	17	18	-	-	-	-
	6,0	160	44	94	16	47	44	43	40	32	30	28	22	-	-	33	27	27	23	22	19	-	-	-
	9,0	239	67	141	36	51	48	46	43	34	32	31	25	-	-	37	31	30	26	24	20	20	-	-
	12,0	319	89	188	64	54	50	48	45	35	33	34	28	-	-	40	33	32	28	25	22	22	-	-
125	0,8	32	9	19	0	28	30	30	26	24	23	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	126	35	74	4	44	41	40	36	30	28	25	-	-	-	29	24	23	19	18	-	-	-	-
	6,0	253	70	149	15	52	46	45	41	34	31	31	24	-	-	37	29	28	24	21	19	-	-	-
	9,0	379	105	223	33	58	50	48	44	36	33	35	29	-	-	43	33	31	27	23	21	22	-	-
	12,0	505	140	297	59	57	52	50	46	37	34	36	30	-	-	42	35	33	29	25	22	23	-	-
160	0,8	56	16	33	0	31	32	31	27	26	25	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	209	58	123	3	44	43	41	37	33	30	26	20	-	-	27	26	23	19	-	-	-	-	-
	6,0	418	116	246	13	52	48	46	42	36	34	32	26	-	-	35	31	28	24	20	20	-	-	-
	9,0	627	174	369	30	56	52	49	46	38	36	34	29	-	-	39	35	31	28	22	22	20	-	-
	12,0	836	232	492	53	59	54	51	48	39	37	35	30	-	-	42	37	33	30	23	23	22	-	-
200	0,8	92	26	54	0	32	36	34	30	29	27	19	-	-	-	-	18	-	-	-	-	-	-	-
	3,0	329	91	194	3	47	46	43	40	35	33	29	24	-	-	29	28	23	20	-	-	-	-	-
	6,0	658	183	387	12	54	52	49	45	38	36	33	29	-	-	36	34	29	25	20	20	-	-	-
	9,0	988	274	581	28	58	55	52	48	40	38	35	30	-	-	40	37	32	28	22	22	20	-	-
	12,0	1317	366	775	50	61	57	54	51	42	39	36	32	-	-	43	39	34	31	24	23	21	-	-
250	0,9	149	41	88	0	35	36	36	31	30	29	20	-	-	-	19	20	18	-	-	-	-	-	-
	3,0	517	144	304	3	48	47	45	41	36	35	30	24	-	-	32	31	28	25	22	23	-	-	-
	6,0	1035	287	609	13	52	52	50	46	40	38	32	27	-	-	36	36	33	30	26	26	20	-	-
	9,0	1552	431	913	29	57	56	53	49	42	40	34	29	-	-	41	40	36	33	28	28	21	-	-
	12,0	2070	575	1218	51	62	58	55	52	43	41	35	30	-	-	46	42	38	36	29	29	23	-	-
315	0,9	243	67	143	0	36	38	37	33	32	31	22	-	-	-	21	22	21	18	19	19	-	-	-
	3,0	826	229	486	3	49	48	46	42	38	37	29	24	-	-	34	32	30	27	25	25	-	-	-
	6,0	1651	459	971	12	56	54	52	48	42	40	32	27	-	-	41	38	36	33	29	29	20	-	-
	9,0	2477	688	1457	26	61	57	55	51	44	42	33	29	-	-	46	41	39	36	31	31	22	-	-
	12,0	3303	917	1943	47	64	59	57	53	45	43	35	30	-	-	49	43	41	38	32	32	23	-	-
355	0,9	312	87	184	0	37	39	38	34	34	33	23	20	-	-	23	23	22	19	22	23	-	-	-
	3,0	1051	292	618	3	50	49	48	43	40	39	29	24	-	-	36	33	32	28	28	29	19	-	-
	6,0	2102	584	1236	11	57	55	53	49	44	43	32	27	-	-	43	39	37	34	32	33	21	-	-
	9,0	3153	876	1855	25	57	58	56	52	46	45	33	29	-	-	43	42	40	37	34	35	22	-	-
	12,0	4204	1168	2473	44	61	61	58	54	47	46	34	30	-	-	47	45	42	39	35	36	23	-	-
400	0,9	401	111	236	0	35	41	40	35	35	33	24	20	-	-	20	25	24	20	23	23	-	-	-
	3,0	1337	371	786	3	50	51	49	44	41	39	29	24	-	-	36	35	33	29	29	29	19	-	-
	6,0	2674	743	1573	10	58	56	54	50	45	43	32	27	-	-	44	40	38	35	33	33	21	-	-
	9,0	4011	1114	2359	24	62	60	57	53	47	45	34	29	-	-	48	44	41	38	35	35	22	-	-
	12,0	5348	1485	3146	42	65	62	59	55	48	46	35	30	-	-	51	46	43	40	36	36	23	-	-
450	0,9	512	142	301	0	38	41	40	36	35	34	25	20	-	-	24	25	24	21	23	24	-	-	-
	3,0	1695	471	997	3	45	51	49	45	42	40	28	24	-	-	31	35	33	30	30	30	-	-	-
	6,0	3390	942	1994	10	58	57	55	51	45	43	31	27	-	-	44	41	39	36	33	33	21	-	-
	9,0	5085	1412	2991	23	63	60	58	54	48	45	33	29	-	-	49	44	42	39	36	35	22	-	-
	12,0	6779	1883	3988	40	66	63	60	56	49	47	34	30	-	-	52	47	44	41	37	37	23	-	-
500	0,9	636	177	374	0	39	42	41	36	36	34	24	20	-	-	25	26	25	21	24	24	-	-	-
	3,0	2095	582	1232	2	51	52	50	46	42	40	28	23	-	-	37	36	34	31	30	30	-	-	-
	6,0	4190	1164	2465	10	59	57	55	51	46	44	31	27	-	-	45	41	39	36	34	34	20	-	-
	9,0	6286	1746	3697	22	63	61	58	54	48	46	33	28	-	-	49	45	42	39	36	36	22	-	-
	12,0	8381	2328	4930	38	66	63	61	57	50	47	34	30	19	-	-	52	47	45	42	38	37	23	-



Pressure drop over unit : 200 Pa

Model	Air Volume				Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)										
	Air Vel.	m ³ /h	l/s	CFM		Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p				
						125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC		
						mm	m/s	m ³ /h	l/s	CFM	Pa	Hz	Hz	Hz	Hz	Hz	Hz	(A)	NR	NC	Hz	Hz	Hz	Hz	Hz
100	0,7	19	5	11	0	29	33	34	29	28	27	-	-	-	-	-	17	-	18	-	-	-	-	-	-
	3,0	80	22	47	4	44	44	44	40	35	34	28	23	-	30	27	28	23	25	22	-	-	-	-	-
	6,0	160	44	94	16	51	50	49	45	38	37	34	28	-	37	33	33	28	28	26	23	-	-	-	-
	9,0	239	67	141	36	55	53	52	48	40	39	37	31	-	41	36	36	31	30	28	26	20	-	-	-
	12,0	319	89	188	64	58	55	54	50	42	40	39	34	-	44	38	38	33	32	29	28	22	-	-	-
125	0,8	32	9	19	0	32	35	35	31	30	29	20	-	-	-	18	18	-	17	-	-	-	-	-	-
	3,0	126	35	74	4	48	46	46	41	36	35	30	24	-	33	29	29	24	24	23	-	-	-	-	-
	6,0	253	70	149	15	56	52	51	46	40	38	36	30	-	41	35	34	29	28	26	24	-	-	-	-
	9,0	379	105	223	33	62	55	54	50	42	40	40	34	-	47	38	37	33	30	28	27	21	-	-	-
	12,0	505	140	297	59	61	57	56	52	43	42	41	36	-	46	40	39	35	31	30	29	23	-	-	-
160	0,8	56	16	33	0	35	38	37	33	32	31	22	-	-	18	21	19	-	-	17	-	-	-	-	-
	3,0	209	58	123	3	48	48	47	43	39	38	32	26	-	31	31	29	25	23	24	19	-	-	-	-
	6,0	418	116	246	13	56	54	52	48	42	41	37	32	-	39	37	34	30	26	27	24	-	-	-	-
	9,0	627	174	369	30	60	57	55	51	44	43	40	35	-	43	40	37	33	28	29	26	20	-	-	-
	12,0	836	232	492	53	63	60	58	53	46	44	41	36	-	46	43	40	35	30	30	27	21	-	-	-
200	0,8	92	26	54	0	36	41	40	36	35	34	25	20	-	18	23	20	-	-	18	-	-	-	-	-
	3,0	329	91	194	3	51	52	50	45	41	40	35	30	-	33	34	30	25	23	24	20	-	-	-	-
	6,0	658	183	387	12	58	57	55	51	45	43	39	35	-	40	39	35	31	27	27	24	-	-	-	-
	9,0	988	274	581	28	62	61	58	54	47	45	40	37	-	44	43	38	34	29	29	25	19	-	-	-
	12,0	1317	366	775	50	65	63	60	56	48	47	42	38	19	47	45	40	36	30	31	26	21	-	-	-
250	0,9	149	41	88	0	39	42	42	37	36	36	26	22	-	23	26	25	21	22	24	-	-	-	-	-
	3,0	517	144	304	3	52	52	51	46	43	42	35	30	-	36	36	34	30	29	30	24	-	-	-	-
	6,0	1035	287	609	13	56	58	56	52	46	45	38	33	-	40	42	39	36	32	33	26	20	-	-	-
	9,0	1552	431	913	29	62	61	59	55	49	47	39	35	-	46	45	42	39	35	35	27	21	-	-	-
	12,0	2070	575	1218	51	66	64	62	57	50	49	40	36	19	50	48	45	41	36	37	28	22	-	-	-
315	0,9	243	67	143	0	40	44	43	38	38	38	28	24	-	25	28	27	23	25	27	-	-	-	-	-
	3,0	826	229	486	3	53	54	53	48	45	44	35	30	-	38	38	37	33	32	33	24	19	-	-	-
	6,0	1651	459	971	12	61	59	58	53	48	47	37	33	-	46	43	42	38	35	36	26	20	-	-	-
	9,0	2477	688	1457	26	65	63	61	56	51	49	39	35	-	50	47	45	41	38	38	28	22	-	-	-
	12,0	3303	917	1943	47	68	65	63	59	52	51	40	36	21	53	49	47	44	39	40	29	23	-	-	-
355	0,9	312	87	184	0	41	45	45	39	40	41	30	27	-	27	29	29	24	28	31	20	19	-	-	-
	3,0	1051	292	618	3	54	55	54	49	47	47	35	30	-	40	39	38	34	35	37	25	22	-	-	-
	6,0	2102	584	1236	11	61	61	59	54	50	50	38	33	-	47	45	43	39	38	40	27	22	-	-	-
	9,0	3153	876	1855	25	61	64	62	58	52	52	39	35	20	47	48	46	43	40	42	28	22	-	-	-
	12,0	4204	1168	2473	44	65	67	64	60	54	54	40	36	23	51	51	48	45	42	44	29	23	-	-	-
400	0,9	401	111	236	0	39	46	46	41	42	41	31	27	-	25	30	30	26	30	31	21	20	-	-	-
	3,0	1337	371	786	3	54	56	55	50	48	47	35	30	-	40	40	39	35	36	37	25	21	-	-	-
	6,0	2674	743	1573	10	62	62	60	56	52	51	38	34	-	48	46	44	41	40	41	27	21	-	-	-
	9,0	4011	1114	2359	24	66	65	64	59	54	53	39	35	21	52	49	48	44	42	43	28	22	-	-	-
	12,0	5348	1485	3146	42	69	68	66	61	55	54	40	37	24	55	52	50	46	43	44	29	23	19	-	-
450	0,9	512	142	301	0	42	47	47	41	42	41	31	27	-	28	31	31	26	30	31	22	20	-	-	-
	3,0	1695	471	997	3	50	57	56	51	48	47	35	30	-	36	41	40	36	36	37	24	20	-	-	-
	6,0	3390	942	1994	10	62	63	61	56	52	51	37	33	-	48	47	45	41	40	41	27	21	-	-	-
	9,0	5085	1412	2991	23	67	66	64	59	54	53	39	35	22	53	50	48	44	42	43	28	22	-	-	-
	12,0	6779	1883	3988	40	70	68	66	62	56	54	40	36	25	56	52	50	47	44	44	29	23	20	-	-
500	0,9	636	177	374	0	43	48	47	42	43	42	31	27	-	29	32	31	27	31	32	21	19	-	-	-
	3,0	2095	582	1232	2	56	57	56	51	49	48	34	30	-	42	41	40	36	37	38	24	20	-	-	-
	6,0	4190	1164	2465	10	63	63	62	57	53	51	37	33	19	49	47	46	42	41	41	26	20	-	-	-
	9,0	6286	1746	3697	22	67	67	65	60	55	53	38	35	23	53	51	49	45	43	43	28	22	-	-	-
	12,0	8381	2328	4930	38	70	69	67	62	56	55	40	36	26	56	53	51	47	44	45	29	23	20	-	-



Pressure drop over unit : 400 Pa

Model	Air Vel.		Air Volume			Min. P _{st}	Discharge sound (Air borne sound)						Radiated sound (Break out sound)											
	mm	m/s	m ³ /h	l/s	CFM		Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p		
							125	250	500	1k	2k	4k	dB	NR	NC	125	250	500	1k	2k	4k	dB	NR	NC
							Hz	Hz	Hz	Hz	Hz	Hz	(A)			Hz	Hz	Hz	Hz	Hz	Hz	(A)		
100	0,7	19	5	11	0	33	38	40	34	34	34	23	20	-	19	21	23	17	24	23	-	-	-	
	3,0	80	22	47	4	48	50	50	45	41	41	34	29	-	34	33	34	28	31	30	24	20	-	
	6,0	160	44	94	16	55	55	55	50	45	44	39	34	-	41	38	39	33	35	33	28	24	-	
	9,0	239	67	141	36	59	58	58	54	47	46	42	37	-	45	41	42	37	37	35	31	26	-	
	12,0	319	89	188	64	62	61	60	56	48	47	45	40	-	48	44	44	39	38	36	33	28	-	
125	0,8	32	9	19	0	36	41	42	36	36	36	26	22	-	21	24	25	19	24	24	-	-	-	
	3,0	126	35	74	4	52	52	52	47	43	42	36	31	-	37	35	35	30	31	30	24	20	-	
	6,0	253	70	149	15	60	57	57	52	46	46	41	36	-	45	40	40	35	34	34	29	24	-	
	9,0	379	105	223	33	66	61	60	55	48	48	45	39	-	51	44	43	38	36	36	33	27	-	
	12,0	505	140	297	59	65	63	62	57	50	49	46	42	-	50	46	45	40	38	37	34	29	-	
160	0,8	56	16	33	0	39	43	44	38	39	38	28	25	-	22	26	25	20	23	24	-	-	-	
	3,0	209	58	123	3	52	54	53	48	45	45	38	32	-	35	37	35	30	29	31	25	19	-	
	6,0	418	116	246	13	60	59	58	53	49	48	43	38	-	43	42	40	35	33	34	30	24	-	
	9,0	627	174	369	30	64	63	62	57	51	50	45	41	-	47	46	44	39	35	36	32	26	-	
	12,0	836	232	492	53	67	65	64	59	52	52	46	42	21	50	48	46	41	36	38	33	27	-	
200	0,8	92	26	54	0	40	47	46	41	41	41	31	28	-	22	29	26	21	23	25	-	-	-	
	3,0	329	91	194	3	55	57	56	51	48	47	40	36	-	37	39	36	31	30	31	26	20	-	
	6,0	658	183	387	12	62	63	61	56	51	51	45	41	19	44	45	41	36	33	35	30	24	-	
	9,0	988	274	581	28	66	66	64	59	53	53	46	43	22	48	48	44	39	35	37	31	25	-	
	12,0	1317	366	775	50	69	69	66	62	55	54	47	44	25	51	51	46	42	37	38	32	27	-	
250	0,9	149	41	88	0	43	48	48	42	43	43	32	30	-	27	32	31	26	29	31	22	20	-	
	3,0	517	144	304	3	56	58	57	52	49	49	41	36	-	40	42	40	36	35	37	30	26	-	
	6,0	1035	287	609	13	60	64	63	57	53	53	43	39	19	44	48	46	41	39	41	32	26	-	
	9,0	1552	431	913	29	66	67	66	60	55	55	45	41	23	50	51	49	44	41	43	33	28	-	
	12,0	2070	575	1218	51	70	69	68	63	57	56	46	42	26	54	53	51	47	43	44	34	29	20	
315	0,9	243	67	143	0	44	49	50	44	45	45	34	32	-	29	33	34	29	32	34	25	23	-	
	3,0	826	229	486	3	57	59	59	53	51	52	41	36	-	42	43	43	38	38	41	30	27	-	
	6,0	1651	459	971	12	65	65	64	59	55	55	43	39	21	50	49	48	44	42	44	32	27	-	
	9,0	2477	688	1457	26	69	69	67	62	57	57	45	41	25	54	53	51	47	44	46	34	28	21	
	12,0	3303	917	1943	47	72	71	70	64	59	58	46	42	28	57	55	54	49	46	47	35	29	23	
355	0,9	312	87	184	0	45	51	51	45	47	48	36	34	-	31	35	35	30	35	38	27	27	-	
	3,0	1051	292	618	3	58	61	60	55	53	54	41	37	-	44	45	44	40	41	44	31	29	-	
	6,0	2102	584	1236	11	65	67	66	60	57	58	44	39	23	51	51	50	45	45	48	33	30	21	
	9,0	3153	876	1855	25	65	70	69	63	59	60	45	41	27	51	54	53	48	47	50	34	30	23	
	12,0	4204	1168	2473	44	69	72	71	65	61	61	46	43	29	55	56	55	50	49	51	35	30	25	
400	0,9	401	111	236	0	43	52	52	46	48	49	37	35	-	29	36	36	31	36	39	28	27	-	
	3,0	1337	371	786	3	59	62	62	56	55	55	41	37	19	45	46	46	41	43	45	31	28	-	
	6,0	2674	743	1573	10	66	68	67	61	58	58	44	40	24	52	52	51	46	46	48	33	29	21	
	9,0	4011	1114	2359	24	70	71	70	64	60	60	45	42	28	56	55	54	49	48	50	34	29	24	
	12,0	5348	1485	3146	42	73	74	72	67	62	62	46	43	31	59	58	56	52	50	52	35	30	26	
450	0,9	512	142	301	0	46	53	53	47	49	49	37	35	-	32	37	37	32	37	39	28	27	-	
	3,0	1695	471	997	3	54	63	62	56	55	55	41	36	19	40	47	46	41	43	45	31	28	-	
	6,0	3390	942	1994	10	67	68	68	62	59	58	43	39	25	53	52	52	47	47	48	33	28	21	
	9,0	5085	1412	2991	23	71	72	71	65	61	60	45	41	29	57	56	55	50	49	50	34	29	24	
	12,0	6779	1883	3988	40	74	74	73	67	62	62	46	43	32	60	58	57	52	50	52	35	30	27	
500	0,9	636	177	374	0	47	53	54	48	49	49	37	34	-	33	37	38	33	37	39	28	26	-	
	3,0	2095	582	1232	2	60	63	63	57	56	55	41	36	19	46	47	47	42	44	45	31	27	-	
	6,0	4190	1164	2465	10	67	69	68	63	59	59	43	39	26	53	53	52	48	47	49	32	28	22	
	9,0	6286	1746	3697	22	72	72	71	66	61	61	44	41	30	58	56	55	51	49	51	34	28	25	
	12,0	8381	2328	4930	38	75	75	74	68	63	62	45	42	32	61	59	58	53	51	52	35	29	28	



Pressure drop over unit : 100 Pa

Model	Air Volume				Min. P _{st} Pa	Discharge sound (Air borne sound)									Radiated sound (Break out sound)								
	Air Vel.					Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p		
	m/s	m ³ /h	l/s	CFM		125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC
	mm																						
100	0,7	19	5	11	0	25	28	28	24	23	21	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	80	22	47	4	40	39	38	34	29	27	23	-	-	-	25	21	20	-	-	-	-	-
	6,0	160	44	94	16	47	44	43	40	32	30	28	22	-	-	32	26	25	22	-	-	-	-
	9,0	239	67	141	36	51	48	46	43	34	32	31	25	-	-	36	30	28	25	-	-	-	-
	12,0	319	89	188	64	54	50	48	45	35	33	34	28	-	-	39	32	30	27	-	18	-	-
125	0,8	32	9	19	0	28	30	30	26	24	23	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	126	35	74	4	44	41	40	36	30	28	25	-	-	-	28	23	22	18	-	-	-	-
	6,0	253	70	149	15	52	46	45	41	34	31	31	24	-	-	36	28	27	23	-	-	-	-
	9,0	379	105	223	33	58	50	48	44	36	33	35	29	-	-	42	32	30	26	-	18	-	-
	12,0	505	140	297	59	57	52	50	46	37	34	36	30	-	-	41	34	32	28	18	19	22	-
160	0,8	56	16	33	0	31	32	31	27	26	25	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	209	58	123	3	44	43	41	37	33	30	26	20	-	-	24	25	23	19	-	-	-	-
	6,0	418	116	246	13	52	48	46	42	36	34	32	26	-	-	32	30	28	24	-	18	-	-
	9,0	627	174	369	30	56	52	49	46	38	36	34	29	-	-	36	34	31	28	18	20	20	-
	12,0	836	232	492	53	59	54	51	48	39	37	35	30	-	-	39	36	33	30	19	21	21	-
200	0,8	92	26	54	0	32	36	34	30	29	27	19	-	-	-	-	-	-	-	-	-	-	-
	3,0	329	91	194	3	47	46	43	40	35	33	29	24	-	-	26	25	22	18	-	18	-	-
	6,0	658	183	387	12	54	52	49	45	38	36	33	29	-	-	33	31	28	23	18	21	-	-
	9,0	988	274	581	28	58	55	52	48	40	38	35	30	-	-	37	34	31	26	20	23	-	-
	12,0	1317	366	775	50	61	57	54	51	42	39	36	32	-	-	40	36	33	29	22	24	19	-
250	0,9	149	41	88	0	35	36	36	31	30	29	20	-	-	-	17	-	-	-	-	-	-	-
	3,0	517	144	304	3	48	47	45	41	36	35	30	24	-	-	29	28	25	23	17	21	-	-
	6,0	1035	287	609	13	52	52	50	46	40	38	32	27	-	-	33	33	30	28	21	24	-	-
	9,0	1552	431	913	29	57	56	53	49	42	40	34	29	-	-	38	37	33	31	23	26	-	-
	12,0	2070	575	1218	51	62	58	55	52	43	41	35	30	-	-	43	39	35	34	24	27	20	-
315	0,9	243	67	143	0	36	38	37	33	32	31	22	-	-	18	18	17	-	-	-	-	-	-
	3,0	826	229	486	3	49	48	46	42	38	37	29	24	-	-	31	28	26	24	20	22	-	-
	6,0	1651	459	971	12	56	54	52	48	42	40	32	27	-	-	38	34	32	30	24	26	-	-
	9,0	2477	688	1457	26	61	57	55	51	44	42	33	29	-	-	43	37	35	33	26	28	-	-
	12,0	3303	917	1943	47	64	59	57	53	45	43	35	30	-	-	46	39	37	35	27	29	19	-
355	0,9	312	87	184	0	37	39	38	34	34	33	23	20	-	-	19	19	18	-	-	20	-	-
	3,0	1051	292	618	3	50	49	48	43	40	39	29	24	-	-	32	29	28	25	22	26	-	-
	6,0	2102	584	1236	11	57	55	53	49	44	43	32	27	-	-	39	35	33	31	26	30	-	-
	9,0	3153	876	1855	25	57	58	56	52	46	45	33	29	-	-	39	38	36	34	28	32	-	-
	12,0	4204	1168	2473	44	61	61	58	54	47	46	34	30	-	-	43	41	38	36	29	33	19	-
400	0,9	401	111	236	0	35	41	40	35	35	33	24	20	-	-	-	21	20	-	-	20	-	-
	3,0	1337	371	786	3	50	51	49	44	41	39	29	24	-	-	32	31	29	26	23	26	-	-
	6,0	2674	743	1573	10	58	56	54	50	45	43	32	27	-	-	40	36	34	32	27	30	-	-
	9,0	4011	1114	2359	24	62	60	57	53	47	45	34	29	-	-	44	40	37	35	29	32	-	-
	12,0	5348	1485	3146	42	65	62	59	55	48	46	35	30	-	-	47	42	39	37	30	33	20	-
450	0,9	512	142	301	0	38	41	40	36	35	34	25	20	-	-	20	21	20	18	17	21	-	-
	3,0	1695	471	997	3	45	51	49	45	42	40	28	24	-	-	27	31	29	27	24	27	-	-
	6,0	3390	942	1994	10	58	57	55	51	45	43	31	27	-	-	40	37	35	33	27	30	-	-
	9,0	5085	1412	2991	23	63	60	58	54	48	45	33	29	-	-	45	40	38	36	30	32	-	-
	12,0	6779	1883	3988	40	66	63	60	56	49	47	34	30	-	-	48	43	40	38	31	34	19	-
500	0,9	636	177	374	0	39	42	41	36	36	34	24	20	-	-	21	22	21	18	18	21	-	-
	3,0	2095	582	1232	2	51	52	50	46	42	40	28	23	-	-	33	32	30	28	24	27	-	-
	6,0	4190	1164	2465	10	59	57	55	51	46	44	31	27	-	-	41	37	35	33	28	31	-	-
	9,0	6286	1746	3697	22	63	61	58	54	48	46	33	28	-	-	45	41	38	36	30	33	-	-
	12,0	8381	2328	4930	38	66	63	61	57	50	47	34	30	19	-	-	48	43	41	39	32	34	19



Pressure drop over unit : 200 Pa

Model	Air Vel.		Air Volume			Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)										
	mm	m/s	m³/h	l/s	CFM		Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p				
							125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC		
100	0,7	19	5	11	0	29	33	34	29	28	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	80	22	47	4	44	44	44	40	35	34	28	23	-	29	26	26	22	-	18	-	-	-	-	-	-
	6,0	160	44	94	16	51	50	49	45	38	37	34	28	-	36	32	31	27	19	22	20	-	-	-	-	-
	9,0	239	67	141	36	55	53	52	48	40	39	37	31	-	40	35	34	30	21	24	23	-	-	-	-	-
	12,0	319	89	188	64	58	55	54	50	42	40	39	34	-	43	37	36	32	23	25	26	20	-	-	-	-
125	0,8	32	9	19	0	32	35	35	31	30	29	20	-	-	-	17	17	-	-	-	-	-	-	-	-	-
	3,0	126	35	74	4	48	46	46	41	36	35	30	24	-	32	28	28	23	17	20	-	-	-	-	-	-
	6,0	253	70	149	15	56	52	51	46	40	38	36	30	-	40	34	33	28	21	23	22	-	-	-	-	-
	9,0	379	105	223	33	62	55	54	50	42	40	40	34	-	46	37	36	32	23	25	26	19	-	-	-	-
	12,0	505	140	297	59	61	57	56	52	43	42	41	36	-	45	39	38	34	24	27	27	22	-	-	-	-
160	0,8	56	16	33	0	35	38	37	33	32	31	22	-	-	-	20	19	-	-	-	-	-	-	-	-	-
	3,0	209	58	123	3	48	48	47	43	39	38	32	26	-	28	30	29	25	19	22	-	-	-	-	-	-
	6,0	418	116	246	13	56	54	52	48	42	41	37	32	-	36	36	34	30	22	25	23	-	-	-	-	-
	9,0	627	174	369	30	60	57	55	51	44	43	40	35	-	40	39	37	33	24	27	25	20	-	-	-	-
	12,0	836	232	492	53	63	60	58	53	46	44	41	36	-	43	42	40	35	26	28	26	21	-	-	-	-
200	0,8	92	26	54	0	36	41	40	36	35	34	25	20	-	-	20	19	-	-	19	-	-	-	-	-	-
	3,0	329	91	194	3	51	52	50	45	41	40	35	30	-	30	31	29	23	21	25	-	-	-	-	-	-
	6,0	658	183	387	12	58	57	55	51	45	43	39	35	-	37	36	34	29	25	28	22	-	-	-	-	-
	9,0	988	274	581	28	62	61	58	54	47	45	40	37	-	41	40	37	32	27	30	23	-	-	-	-	-
	12,0	1317	366	775	50	65	63	60	56	48	47	42	38	19	44	42	39	34	28	32	24	19	-	-	-	-
250	0,9	149	41	88	0	39	42	42	37	36	36	26	22	-	20	23	22	19	17	22	-	-	-	-	-	-
	3,0	517	144	304	3	52	52	51	46	43	42	35	30	-	33	33	31	28	24	28	21	-	-	-	-	-
	6,0	1035	287	609	13	56	58	56	52	46	45	38	33	-	37	39	36	34	27	31	23	-	-	-	-	-
	9,0	1552	431	913	29	62	61	59	55	49	47	39	35	-	43	42	39	37	30	33	24	-	-	-	-	-
	12,0	2070	575	1218	51	66	64	62	57	50	49	40	36	19	47	45	42	39	31	35	25	19	-	-	-	-
315	0,9	243	67	143	0	40	44	43	38	38	38	28	24	-	22	24	23	20	20	24	-	-	-	-	-	-
	3,0	826	229	486	3	53	54	53	48	45	44	35	30	-	35	34	33	30	27	30	20	-	-	-	-	-
	6,0	1651	459	971	12	61	59	58	53	48	47	37	33	-	43	39	38	35	30	33	23	-	-	-	-	-
	9,0	2477	688	1457	26	65	63	61	56	51	49	39	35	-	47	43	41	38	33	35	24	-	-	-	-	-
	12,0	3303	917	1943	47	68	65	63	59	52	51	40	36	21	50	45	43	41	34	37	25	19	-	-	-	-
355	0,9	312	87	184	0	41	45	45	39	40	41	30	27	-	23	25	25	21	22	28	-	-	-	-	-	-
	3,0	1051	292	618	3	54	55	54	49	47	47	35	30	-	36	35	34	31	29	34	21	19	-	-	-	-
	6,0	2102	584	1236	11	61	61	59	54	50	50	38	33	-	43	41	39	36	32	37	23	19	-	-	-	-
	9,0	3153	876	1855	25	61	64	62	58	52	52	39	35	20	43	44	42	40	34	39	24	20	-	-	-	-
	12,0	4204	1168	2473	44	65	67	64	60	54	54	40	36	23	47	47	44	42	36	41	25	20	-	-	-	-
400	0,9	401	111	236	0	39	46	46	41	42	41	31	27	-	21	26	26	23	24	28	-	-	-	-	-	-
	3,0	1337	371	786	3	54	56	55	50	48	47	35	30	-	36	36	35	32	30	34	21	-	-	-	-	-
	6,0	2674	743	1573	10	62	62	60	56	52	51	38	34	-	44	42	40	38	34	38	23	19	-	-	-	-
	9,0	4011	1114	2359	24	66	65	64	59	54	53	39	35	21	48	45	44	41	36	40	24	19	-	-	-	-
	12,0	5348	1485	3146	42	69	68	66	61	55	54	40	37	24	51	48	46	43	37	41	25	19	-	-	-	-
450	0,9	512	142	301	0	42	47	47	41	42	41	31	27	-	24	27	27	23	24	28	-	-	-	-	-	-
	3,0	1695	471	997	3	50	57	56	51	48	47	35	30	-	32	37	36	33	30	34	20	-	-	-	-	-
	6,0	3390	942	1994	10	62	63	61	56	52	51	37	33	-	44	43	41	38	34	38	23	-	-	-	-	-
	9,0	5085	1412	2991	23	67	66	64	59	54	53	39	35	22	49	46	44	41	36	40	24	-	-	-	-	-
	12,0	6779	1883	3988	40	70	68	66	62	56	54	40	36	25	52	48	46	44	38	41	25	19	-	-	-	-
500	0,9	636	177	374	0	43	48	47	42	43	42	31	27	-	25	28	27	24	25	29	-	-	-	-	-	-
	3,0	2095	582	1232	2	56	57	56	51	49	48	34	30	-	38	37	36	33	31	35	20	-	-	-	-	-
	6,0	4190	1164	2465	10	63	63	62	57	53	51	37	33	19	45	43	42	39	35	38	22	-	-	-	-	-
	9,0	6286	1746	3697	22	67	67	65	60	55	53	38	35	23	49	47	45	42	37	40	24	-	-	-	-	-
	12,0	8381	2328	4930	38	70	69	67	62	56	55	40	36	26	52	49	47	44	38	42	25	19	-	-	-	-



Pressure drop over unit : 400 Pa

Model	Air Volume				Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)									
	mm	m/s	m ³ /h	l/s		CFM	Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p		
							125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC
100	0,7	19	5	11	0	33	38	40	34	34	34	23	20	-	18	20	21	-	-	19	-	-	-	
	3,0	80	22	47	4	48	50	50	45	41	41	34	29	-	33	32	32	27	22	26	21	-	-	
	6,0	160	44	94	16	55	55	55	50	45	44	39	34	-	40	37	37	32	26	29	26	21	-	
	9,0	239	67	141	36	59	58	58	54	47	46	42	37	-	44	40	40	36	28	31	29	24	-	
	12,0	319	89	188	64	62	61	60	56	48	47	45	40	-	47	43	42	38	29	32	31	26	-	
125	0,8	32	9	19	0	36	41	42	36	36	36	26	22	-	20	23	24	18	-	21	-	-	-	
	3,0	126	35	74	4	52	52	52	47	43	42	36	31	-	36	34	34	29	24	27	22	-	-	
	6,0	253	70	149	15	60	57	57	52	46	46	41	36	-	44	39	39	34	27	31	28	23	-	
	9,0	379	105	223	33	66	61	60	55	48	48	45	39	-	50	43	42	37	29	33	31	26	-	
	12,0	505	140	297	59	65	63	62	57	50	49	46	42	-	49	45	44	39	31	34	33	28	-	
160	0,8	56	16	33	0	39	43	44	38	39	38	28	25	-	19	25	25	20	19	22	-	-	-	
	3,0	209	58	123	3	52	54	53	48	45	45	38	32	-	32	36	35	30	25	29	24	19	-	
	6,0	418	116	246	13	60	59	58	53	49	48	43	38	-	40	41	40	35	29	32	29	24	-	
	9,0	627	174	369	30	64	63	62	57	51	50	45	41	-	44	45	44	39	31	34	31	26	-	
	12,0	836	232	492	53	67	65	64	59	52	52	46	42	21	47	47	46	41	32	36	32	27	-	
200	0,8	92	26	54	0	40	47	46	41	41	41	31	28	-	19	26	25	19	21	26	-	-	-	
	3,0	329	91	194	3	55	57	56	51	48	47	40	36	-	34	36	35	29	28	32	24	21	-	
	6,0	658	183	387	12	62	63	61	56	51	51	45	41	19	41	42	40	34	31	36	28	23	-	
	9,0	988	274	581	28	66	66	64	59	53	53	46	43	22	45	45	43	37	33	38	29	24	-	
	12,0	1317	366	775	50	69	69	66	62	55	54	47	44	25	48	48	45	40	35	39	30	25	-	
250	0,9	149	41	88	0	43	48	48	42	43	43	32	30	-	24	29	28	24	24	29	19	-	-	
	3,0	517	144	304	3	56	58	57	52	49	49	41	36	-	37	39	37	34	30	35	27	24	-	
	6,0	1035	287	609	13	60	64	63	57	53	53	43	39	19	41	45	43	39	34	39	29	24	-	
	9,0	1552	431	913	29	66	67	66	60	55	55	45	41	23	47	48	46	42	36	41	30	25	-	
	12,0	2070	575	1218	51	70	69	68	63	57	56	46	42	26	51	50	48	45	38	42	31	26	-	
315	0,9	243	67	143	0	44	49	50	44	45	45	34	32	-	26	29	30	26	27	31	21	20	-	
	3,0	826	229	486	3	57	59	59	53	51	52	41	36	-	39	39	39	35	33	38	27	24	-	
	6,0	1651	459	971	12	65	65	64	59	55	55	43	39	21	47	45	44	41	37	41	29	24	-	
	9,0	2477	688	1457	26	69	69	67	62	57	57	45	41	25	51	49	47	44	39	43	30	24	-	
	12,0	3303	917	1943	47	72	71	70	64	59	58	46	42	28	54	51	50	46	41	44	31	25	19	
355	0,9	312	87	184	0	45	51	51	45	47	48	36	34	-	27	31	31	27	29	35	23	24	-	
	3,0	1051	292	618	3	58	61	60	55	53	54	41	37	-	40	41	40	37	35	41	28	26	-	
	6,0	2102	584	1236	11	65	67	66	60	57	58	44	39	23	47	47	46	42	39	45	29	27	-	
	9,0	3153	876	1855	25	65	70	69	63	59	60	45	41	27	47	50	49	45	41	47	30	27	20	
	12,0	4204	1168	2473	44	69	72	71	65	61	61	46	43	29	51	52	51	47	43	48	31	27	21	
400	0,9	401	111	236	0	43	52	52	46	48	49	37	35	-	25	32	32	28	30	36	24	24	-	
	3,0	1337	371	786	3	59	62	62	56	55	55	41	37	19	41	42	42	38	37	42	27	26	-	
	6,0	2674	743	1573	10	66	68	67	61	58	58	44	40	24	48	48	47	43	40	45	29	26	-	
	9,0	4011	1114	2359	24	70	71	70	64	60	60	45	42	28	52	51	50	46	42	47	31	26	20	
	12,0	5348	1485	3146	42	73	74	72	67	62	62	46	43	31	55	54	52	49	44	49	31	26	22	
450	0,9	512	142	301	0	46	53	53	47	49	49	37	35	-	28	33	33	29	31	36	24	24	-	
	3,0	1695	471	997	3	54	63	62	56	55	55	41	36	19	36	43	42	38	37	42	27	25	-	
	6,0	3390	942	1994	10	67	68	68	62	59	58	43	39	25	49	48	48	44	41	45	29	25	19	
	9,0	5085	1412	2991	23	71	72	71	65	61	60	45	41	29	53	52	51	47	43	47	30	25	20	
	12,0	6779	1883	3988	40	74	74	73	67	62	62	46	43	32	56	54	53	49	44	49	31	26	22	
500	0,9	636	177	374	0	47	53	54	48	49	49	37	34	-	29	33	34	30	31	36	24	24	-	
	3,0	2095	582	1232	2	60	63	63	57	56	55	41	36	19	42	43	43	39	38	42	27	24	-	
	6,0	4190	1164	2465	10	67	69	68	63	59	59	43	39	26	49	49	48	45	41	46	29	25	19	
	9,0	6286	1746	3697	22	72	72	71	66	61	61	44	41	30	54	52	51	48	43	48	30	25	21	
	12,0	8381	2328	4930	38	75	75	74	68	63	62	45	42	32	57	55	54	50	45	49	31	25	23	



Pressure drop over unit : 100 Pa

Model	Air Vel.		Air Volume		Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)									
						Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			
	mm	m/s	m ³ /h	l/s		CFM	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC
100	0,7	19	5	11	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3,0	80	22	47	4	28	-	-	-	-	-	-	-	25	21	20	-	-	-	-	-	-	-	
	6,0	160	44	94	16	36	28	23	18	-	-	-	-	32	26	25	22	-	-	-	-	-	-	
	9,0	239	67	141	36	43	38	34	30	25	19	22	-	36	30	28	25	-	-	-	-	-	-	
	12,0	319	89	188	64	50	46	42	38	33	28	29	24	39	32	30	27	-	18	-	-	-	-	
125	0,8	32	9	19	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3,0	126	35	74	4	33	20	-	-	-	-	-	-	28	23	22	18	-	-	-	-	-	-	
	6,0	253	70	149	15	42	31	25	20	-	-	-	-	36	28	27	23	-	-	-	-	-	-	
	9,0	379	105	223	33	48	40	36	32	27	21	25	19	42	32	30	26	-	18	-	-	-	-	
	12,0	505	140	297	59	52	48	44	40	35	30	31	26	41	34	32	28	18	19	22	-	-	-	
160	0,8	56	16	33	0	23	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3,0	209	58	123	3	36	28	18	-	-	-	-	-	24	25	23	19	-	-	-	-	-	-	
	6,0	418	116	246	13	44	35	29	22	17	-	-	-	32	30	28	24	-	18	-	-	-	-	
	9,0	627	174	369	30	50	43	39	34	29	24	26	20	36	34	31	28	18	20	20	-	-	-	
	12,0	836	232	492	53	55	50	46	42	37	32	31	26	39	36	33	30	19	21	21	-	-	-	
200	0,8	92	26	54	0	27	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3,0	329	91	194	3	42	35	26	-	-	19	-	-	26	25	22	18	-	18	-	-	-	-	
	6,0	658	183	387	12	49	42	33	25	20	22	24	-	33	31	28	23	18	21	-	-	-	-	
	9,0	988	274	581	28	54	47	41	36	31	27	28	22	37	34	31	26	20	23	-	-	-	-	
	12,0	1317	366	775	50	59	53	49	44	39	35	32	27	40	36	33	29	22	24	19	-	-	-	
250	0,9	149	41	88	0	31	27	20	-	-	17	-	-	-	17	-	-	-	-	-	-	-	-	
	3,0	517	144	304	3	44	38	30	-	18	24	-	-	29	28	25	23	17	21	-	-	-	-	
	6,0	1035	287	609	13	49	44	37	27	24	27	23	-	33	33	30	28	21	24	-	-	-	-	
	9,0	1552	431	913	29	55	49	44	38	33	31	27	22	38	37	33	31	23	26	-	-	-	-	
	12,0	2070	575	1218	51	60	55	51	46	41	37	32	27	43	39	35	34	24	27	20	-	-	-	
315	0,9	243	67	143	0	33	32	25	-	18	23	-	-	18	18	17	-	-	-	-	-	-	-	
	3,0	826	229	486	3	46	42	34	18	24	29	22	-	31	28	26	24	20	22	-	-	-	-	
	6,0	1651	459	971	12	54	48	40	29	29	33	26	21	38	34	32	30	24	26	-	-	-	-	
	9,0	2477	688	1457	26	59	53	47	40	36	36	29	24	43	37	35	33	26	28	-	-	-	-	
	12,0	3303	917	1943	47	63	58	53	48	43	40	33	28	46	39	37	35	27	29	19	-	-	-	
355	0,9	312	87	184	0	35	34	27	-	23	28	-	-	19	19	18	-	-	20	-	-	-	-	
	3,0	1051	292	618	3	48	44	37	22	29	34	23	19	32	29	28	25	22	26	-	-	-	-	
	6,0	2102	584	1236	11	55	50	43	32	33	38	27	22	39	35	33	31	26	30	-	-	-	-	
	9,0	3153	876	1855	25	57	55	48	41	38	40	28	25	39	38	36	34	28	32	-	-	-	-	
	12,0	4204	1168	2473	44	62	59	54	49	45	43	32	29	43	41	38	36	29	33	19	-	-	-	
400	0,9	401	111	236	0	32	37	30	-	25	29	-	-	-	21	20	-	-	20	-	-	-	-	
	3,0	1337	371	786	3	48	47	39	26	31	35	24	20	32	31	29	26	23	26	-	-	-	-	
	6,0	2674	743	1573	10	56	52	45	34	35	39	27	23	40	36	34	32	27	30	-	-	-	-	
	9,0	4011	1114	2359	24	61	57	50	43	40	41	30	26	44	40	37	35	29	32	-	-	-	-	
	12,0	5348	1485	3146	42	65	61	56	51	46	44	33	29	47	42	39	37	30	33	20	-	-	-	



Pressure drop over unit : 200 Pa

Model	Air Vel.		Air Volume			Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)								
							Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p		
	mm	m/s	m ³ /h	l/s	CFM		Pa	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR
100	0,7	19	5	11	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	80	22	47	4	32	21	-	-	-	-	-	-	-	29	26	26	22	-	18	-	-	-	
	6,0	160	44	94	16	40	30	23	18	-	-	-	-	-	36	32	31	27	19	22	20	-	-	
	9,0	239	67	141	36	45	39	34	30	25	19	23	-	-	40	35	34	30	21	24	23	-	-	
	12,0	319	89	188	64	51	46	42	38	33	28	29	24	-	43	37	36	32	23	25	26	20	-	
125	0,8	32	9	19	0	21	-	-	-	-	-	-	-	-	-	17	17	-	-	-	-	-	-	
	3,0	126	35	74	4	37	25	-	-	-	-	-	-	-	32	28	28	23	17	20	-	-	-	
	6,0	253	70	149	15	46	33	26	20	-	-	-	-	-	40	34	33	28	21	23	22	-	-	
	9,0	379	105	223	33	51	41	36	32	27	21	27	22	-	46	37	36	32	23	25	26	19	-	
	12,0	505	140	297	59	53	48	44	40	35	30	31	26	-	45	39	38	34	24	27	27	22	-	
160	0,8	56	16	33	0	27	23	-	-	-	-	-	-	-	-	20	19	-	-	-	-	-	-	
	3,0	209	58	123	3	40	33	24	-	-	20	-	-	-	28	30	29	25	19	22	-	-	-	
	6,0	418	116	246	13	48	40	31	23	18	23	24	-	-	36	36	34	30	22	25	23	-	-	
	9,0	627	174	369	30	53	45	39	34	29	27	28	23	-	40	39	37	33	24	27	25	20	-	
	12,0	836	232	492	53	57	51	47	42	37	33	32	27	-	43	42	40	35	26	28	26	21	-	
200	0,8	92	26	54	0	31	30	22	-	-	20	-	-	-	-	20	19	-	-	19	-	-	-	
	3,0	329	91	194	3	46	41	32	-	17	26	-	-	-	30	31	29	23	21	25	-	-	-	
	6,0	658	183	387	12	53	47	38	26	23	29	28	23	-	37	36	34	29	25	28	22	-	-	
	9,0	988	274	581	28	58	51	43	36	31	32	31	26	-	41	40	37	32	27	30	23	-	-	
	12,0	1317	366	775	50	61	55	49	44	39	36	34	29	-	44	42	39	34	28	32	24	19	-	
250	0,9	149	41	88	0	35	33	27	-	18	25	-	-	-	20	23	22	19	17	22	-	-	-	
	3,0	517	144	304	3	48	43	36	20	25	31	26	21	-	33	33	31	28	24	28	21	-	-	
	6,0	1035	287	609	13	52	49	42	29	29	34	28	24	-	37	39	36	34	27	31	23	-	-	
	9,0	1552	431	913	29	58	53	46	38	35	37	31	26	-	43	42	39	37	30	33	24	-	-	
	12,0	2070	575	1218	51	63	57	52	46	42	40	34	30	-	47	45	42	39	31	35	25	19	-	
315	0,9	243	67	143	0	37	38	31	-	24	31	-	-	-	22	24	23	20	20	24	-	-	-	
	3,0	826	229	486	3	50	48	41	24	31	37	27	23	-	35	34	33	30	27	30	20	-	-	
	6,0	1651	459	971	12	58	54	46	32	35	40	31	27	-	43	39	38	35	30	33	23	-	-	
	9,0	2477	688	1457	26	62	57	50	41	39	43	33	29	-	47	43	41	38	33	35	24	-	-	
	12,0	3303	917	1943	47	66	61	55	48	44	45	35	31	-	50	45	43	41	34	37	25	19	-	
355	0,9	312	87	184	0	39	40	34	18	29	36	23	22	-	23	25	25	21	22	28	-	-	-	
	3,0	1051	292	618	3	52	50	43	28	36	42	29	25	-	36	35	34	31	29	34	21	19	-	
	6,0	2102	584	1236	11	59	56	48	35	39	45	32	28	-	43	41	39	36	32	37	23	19	-	
	9,0	3153	876	1855	25	60	60	52	42	42	47	33	30	-	43	44	42	40	34	39	24	20	-	
	12,0	4204	1168	2473	44	65	63	56	50	47	49	35	32	-	47	47	44	42	36	41	25	20	-	
400	0,9	401	111	236	0	37	42	36	22	32	37	24	23	-	21	26	26	23	24	28	-	-	-	
	3,0	1337	371	786	3	53	52	45	31	38	43	30	26	-	36	36	35	32	30	34	21	-	-	
	6,0	2674	743	1573	10	60	58	51	37	42	47	32	29	-	44	42	40	38	34	38	23	19	-	
	9,0	4011	1114	2359	24	65	62	54	44	44	49	34	31	-	48	45	44	41	36	40	24	19	-	
	12,0	5348	1485	3146	42	68	65	58	51	48	50	37	33	21	51	48	46	43	37	41	25	19	-	



Pressure drop over unit : 400 Pa

Model	Air Vel.	Air Volume			Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)											
		mm	m/s	m ³ /h		l/s	CFM	Pa	Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p		
									125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC
100	0,7	19	5	11	0	21	-	-	-	-	-	-	-	-	18	20	21	-	-	19	-	-	-			
	3,0	80	22	47	4	36	27	-	-	-	-	-	-	-	33	32	32	27	22	26	21	-	-			
	6,0	160	44	94	16	43	33	25	18	-	-	-	-	-	40	37	37	32	26	29	26	21	-			
	9,0	239	67	141	36	48	40	35	30	25	19	25	19	-	44	40	40	36	28	31	29	24	-			
	12,0	319	89	188	64	53	47	42	38	33	28	30	24	-	47	43	42	38	29	32	31	26	-			
125	0,8	32	9	19	0	25	20	-	-	-	-	-	-	-	20	23	24	18	-	21	-	-	-			
	3,0	126	35	74	4	41	31	19	-	-	-	-	-	-	36	34	34	29	24	27	22	-	-			
	6,0	253	70	149	15	49	37	27	20	-	-	-	-	-	44	39	39	34	27	31	28	23	-			
	9,0	379	105	223	33	55	43	37	32	27	22	30	26	-	50	43	42	37	29	33	31	26	-			
	12,0	505	140	297	59	55	49	44	40	35	30	33	27	-	49	45	44	39	31	34	33	28	-			
160	0,8	56	16	33	0	31	28	20	-	-	20	-	-	-	19	25	25	20	19	22	-	-	-			
	3,0	209	58	123	3	44	39	30	-	-	27	-	-	-	32	36	35	30	25	29	24	19	-			
	6,0	418	116	246	13	52	45	36	24	22	30	28	23	-	40	41	40	35	29	32	29	24	-			
	9,0	627	174	369	30	56	49	41	34	30	33	32	27	-	44	45	44	39	31	34	31	26	-			
	12,0	836	232	492	53	60	53	47	42	37	36	35	30	-	47	47	46	41	32	36	32	27	-			
200	0,8	92	26	54	0	35	36	28	-	17	27	-	-	-	19	26	25	19	21	26	-	-	-			
	3,0	329	91	194	3	50	46	38	21	24	33	28	24	-	34	36	35	29	28	32	24	21	-			
	6,0	658	183	387	12	57	52	43	28	28	37	33	29	-	41	42	40	34	31	36	28	23	-			
	9,0	988	274	581	28	61	56	47	37	33	39	35	31	-	45	45	43	37	33	38	29	24	-			
	12,0	1317	366	775	50	65	59	51	45	40	41	38	33	-	48	48	45	40	35	39	30	25	-			
250	0,9	149	41	88	0	39	39	33	-	25	32	-	-	-	24	29	28	24	24	29	19	-	-			
	3,0	517	144	304	3	52	49	42	25	31	38	31	27	-	37	39	37	34	30	35	27	24	-			
	6,0	1035	287	609	13	56	55	48	32	35	42	33	30	-	41	45	43	39	34	39	29	24	-			
	9,0	1552	431	913	29	62	58	51	39	38	44	35	32	-	47	48	46	42	36	41	30	25	-			
	12,0	2070	575	1218	51	66	61	55	47	43	46	38	34	-	51	50	48	45	38	42	31	26	-			
315	0,9	243	67	143	0	41	43	38	20	31	38	26	25	-	26	29	30	26	27	31	21	20	-			
	3,0	826	229	486	3	54	53	47	29	37	45	33	29	-	39	39	39	35	33	38	27	24	-			
	6,0	1651	459	971	12	62	59	52	36	41	48	36	33	-	47	45	44	41	37	41	29	24	-			
	9,0	2477	688	1457	26	66	63	56	42	44	50	38	35	-	51	49	47	44	39	43	30	24	-			
	12,0	3303	917	1943	47	69	65	59	49	47	52	39	36	21	54	51	50	46	41	44	31	25	19			
355	0,9	312	87	184	0	43	46	40	24	36	43	29	30	-	27	31	31	27	29	35	23	24	-			
	3,0	1051	292	618	3	56	56	49	34	42	49	35	32	-	40	41	40	37	35	41	28	26	-			
	6,0	2102	584	1236	11	63	62	55	39	46	53	37	34	-	47	47	46	42	39	45	29	27	-			
	9,0	3153	876	1855	25	64	65	58	45	48	55	38	36	21	47	50	49	45	41	47	30	27	20			
	12,0	4204	1168	2473	44	68	68	61	51	51	56	40	38	24	51	52	51	47	43	48	31	27	21			
400	0,9	401	111	236	0	41	48	42	27	38	45	31	31	-	25	32	32	28	30	36	24	24	-			
	3,0	1337	371	786	3	57	58	52	37	45	51	36	32	-	41	42	42	38	37	42	27	26	-			
	6,0	2674	743	1573	10	64	64	57	43	48	54	38	35	20	48	48	47	43	40	45	29	26	-			
	9,0	4011	1114	2359	24	69	67	60	47	51	56	40	37	24	52	51	50	46	42	47	31	26	20			
	12,0	5348	1485	3146	42	72	70	63	52	53	58	41	39	27	55	54	52	49	44	49	31	26	22			



AZVSR	-	DW	-	250	-	BAC	-	600	-	m³/h
Type		Construction		Model/size		Controls		Air volume		units
Single wall		SW		100		BE1		Belimo LMV-D3-MP (5 Nm)		m ³ /h
Double wall 50mm (standard)		DW		125		BE2		Belimo NMV-D3-MP (10Nm)		l/s
Double wall 25mm (on request)		DW25		160		BE3		Belimo VRD + NM24-V (10Nm)		cfm
With sound attenuator (supply)		SAS		200		BE4		Belimo VRP + VFP300+LM24-V		
With sound attenuator (return)		SAR		250		BE5		Belimo VRP-M+VFP300+LMQ24A-SRV-ST		
				315		BAC		BACnet 8008-57		
				355		KNX		KNX Siemens GDB181-1E/KN		
				400		EX1		EX explosion proof, zone-1		
				450		EX2		EX explosion proof, zone-2		
				500						

Specify as:

Example:

Supply and install, VAV terminal, double wall construction, from galvanized sheet steel, duct sleeve connections suitable for DIN 24 145 or DIN 24 146. Casing leakage rate to class II, VDI 3803/ DIN 24 194. The VAV units should have a low leakage, sandwich construction damper blade with SBR gasket and an aluminium damper shaft with self lubricating Nylon bearings and averaging airflow sensor type FloXact®.

For:

Air volume m ³ /h
Unit size mm
Max. pressure loss Pa
Max. discharge SPL dB(A)
Max. radiated SPL dB(A)
Controller	BACnet type 8008-57 (factory programmed, fitted and calibrated)

Type AZVSR-J6-xxx-BAC-xxx-

Delivery / Controls

- All controls fitted are pressure independent and factory calibrated.
- The unit can be supplied with analogue, DDC or pneumatic controls
- When units are ordered with controls "free-issued" by 3rd party, wiring diagrams, calibration instructions, calibration tools and mounting instructions must be provided free of charge.
- All controls will be mounted, as standard, on the right hand side of the unit when looking in the direction of airflow, unless otherwise requested.