

1.2.2 Rectangular, double wall VAV terminals

VSQ-DW(L)



Application

VAV (Variable-Air-Volume) terminals are commonly used to control room temperature by varying the air volume to the space. If the room temperature raises above the set point, the damper modulates open to supply more (cold) primary air into the room. 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 room. Should the cooling load drop even further at the minimum airflow setting, a reheat coil (hot water or electric) can be energized to provide heating, preventing the room temperature to drop below setpoint.

VAV can also be used to control ventilation (CO₂ and/or PM₅) or control pressure in the room.



Type VSQ-DW-BE1 with Belimo LMV-D3-FLX

Design features

Casing

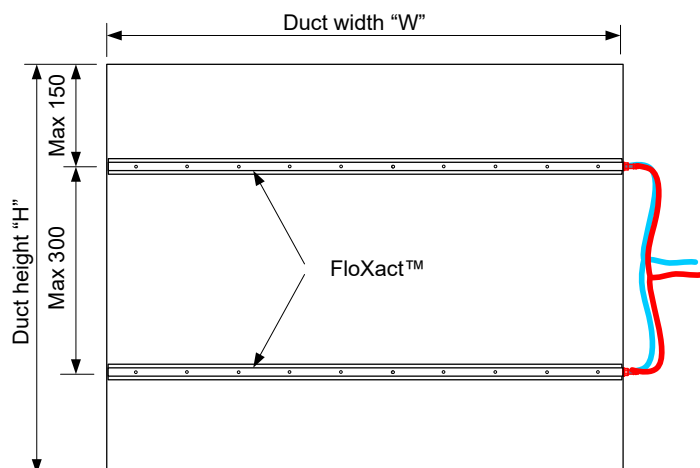
- Ridged galvanised Magnelis® steel construction (1.2mm). Magnelis has a very smooth crystalline surface structure and is 3x more corrosion proof than regular galvanized steel.
- Flanges: 30mm, corner holes ø8x21mm, suitable for 20 to 30mm duct flanges.
- Double wall construction with 25mm mineral wool insulation and 0.8mm galvanised steel cladding.
- Standard damper blade (DW), steel construction, 100mm pitch, air-tightness EN 1751 Class 2
- Air-Tight damper blade (DWL), extruded aluminium with rubber edge seals and side seals, 100mm pitch, air-tightness EN 1751 Class 4.
- Casing leakage EN 1751 Class B
- Damper shaft 10x10mm with Nylon bearings.
- Operating temperature +10 to 50°C
- Storage temperature 0 to 70°C, max R.H. 95%
- Other construction available upon request.

Air flow sensor FloXact™

- The unique shape, creates a linear amplified signal (at least 2.5x Pdyn) with a low noise level and pressure drop.
- Multi point averaging
- 1% (FS) accuracy with 3x Deq straight duct approach
- 5% (FS) accuracy with 1x Deq straight duct approach
- Stable measuring signal from 0,8 m/s air velocity



Type FloXact™



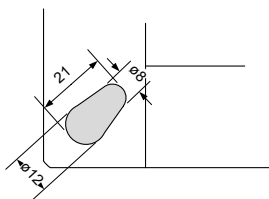
Distribution multiple FloXact™ probes in VSQ units

Kv Values FloXact™ in L/s.Pa

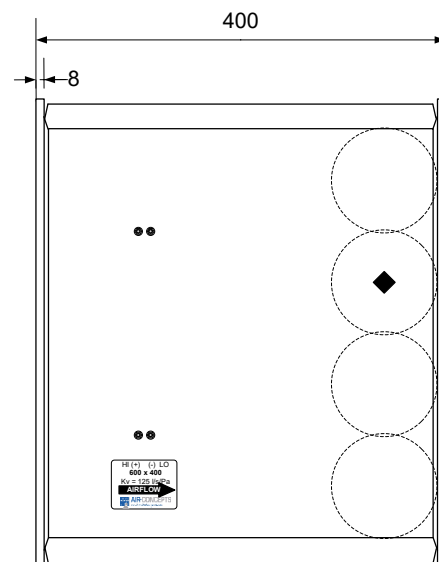
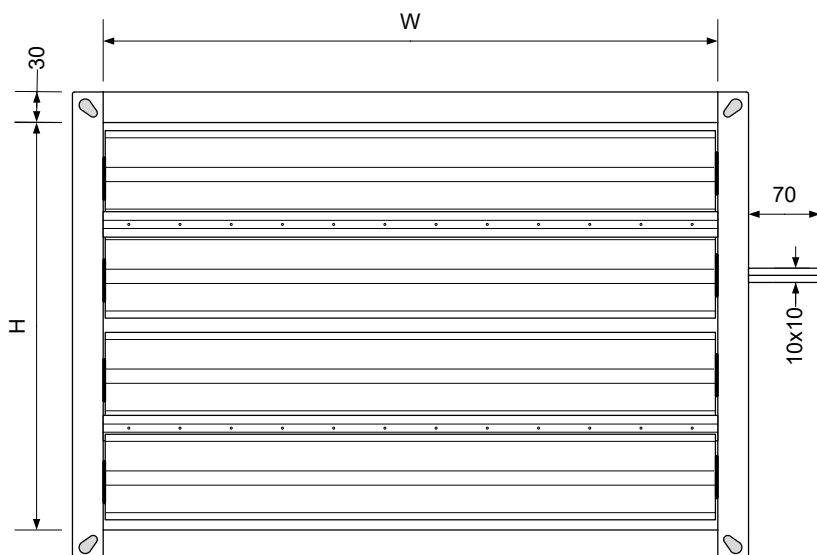
Duct	N°	Duct or unit width "W"													
		200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200
"H"	FloXact™	K _v value in l/s/Pa													
150	1	23,0	28,8	34,5	40,3	46,0	51,8	57,5	69,1	80,6	92,1	104	115	127	138
200		33,1	41,4	49,7	58,0	66,3	74,6	82,9	99,4	116	133	149	166	182	199
250		41,4	51,8	62,1	72,5	82,9	93,2	104	124	145	166	186	207	228	249
300		47,0	58,7	70,4	82,2	94	106	117	141	164	188	211	235	258	282
350	2	55,2	69,1	82,9	96,7	110	124	138	166	193	221	249	276	304	331
400		65,4	81,7	98,1	114	131	147	163	196	229	261	294	327	360	392
450		73,7	92,1	110	129	147	166	184	221	258	295	331	368	405	442
500		83,8	105	126	147	168	189	209	251	293	335	377	419	461	503
600	3	101	127	152	177	203	228	253	304	354	405	456	506	557	608
700		115	144	173	201	230	259	288	345	403	460	518	575	633	691
800		133	167	200	234	267	300	334	400	467	534	601	667	734	801
900		152	190	228	266	304	342	380	456	532	608	684	760	836	911
1000	4	166	207	249	290	331	373	414	497	580	663	746	829	911	994
1100		184	230	276	322	368	414	460	552	644	737	829	921	1013	1105
1200		203	253	304	354	405	456	506	608	709	810	911	1013	1114	1215

- The air volume can be determined with the formula below:

$$Q = K_v \times \sqrt{P_{fs}}$$
 Q = air volume in l/s
 K_v = K_v value in l/s/Pa
 P_{fs} = pressure difference measured by the FloXact™ in Pa
- The table above is for air with 1.20 kg/m³ density (20°C, 50% r.h. and 1013 mbar). The correction for different densities is determined with the following formula : $Corr = \sqrt{(density/1.20)}$
- For intermediate sizes, please contact our office



Flange detail



Type VSQ-DW (double wall construction), drawn model 600x400

Accessories / Optional

The units are supplied as standard with controls on the right side (seen in the air direction).

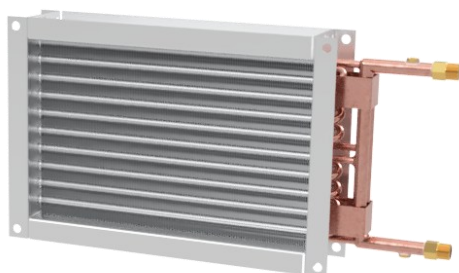
- Standard Controls:
 - BE1 Belimo LMV-D3-MP. 5Nm, 0-10V with NFC
 - BEX Belimo LMV0D3-FLX. 5Nm, 0-10V without NFC
 - BEM Belimo LMV-D3-MOD. 5Nm, MODbus/BACnet
 - BA1 Belimo LMV-BAC-001. 5Nm, ZoneEase BACnet
 - BA2 Belimo LMV-BAC-002. 5Nm, ZoneEase BACnet
 The above controllers are factory mounted, calibrated and, if desired, provided with a location label.
- If desired, Air-Concepts can install free issue controls. We have suitable mounting consoles for all common control manufacturers.
- Transformer 230/24V AC (20 or 30VA)
- Hot water duct heater 1-, 2-, or 4-row. Type HWQ
- Electric duct heater. Type HER



BEM (LMV-D3-MOD)



BEB2 (LMV-BAC-002)



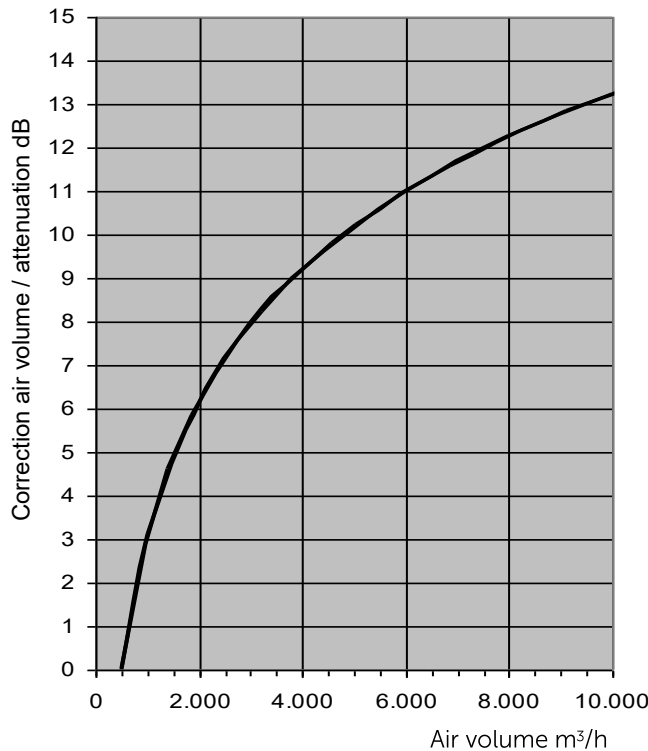
HWQ-2R-400x250

Sound data dB(A) and NR

1. The discharge sound pressure levels $L_p(A)$, 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

2. The discharge sound pressure levels $L_p(A)$ also include a correction for air volume :



3. The Radiated sound pressure levels $L_p(A)$ 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

4. Sound data is measured in a reverberation room at an independent sound laboratory, according to ISO-3741 and ISO-5135 standards.
5. 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 "-".
6. n/a Not applicable, static pressure < unit resistance
7. min ΔP_s . Unit resistance with fully opened damper blade

Sound data NC

1. The sound pressure levels $L_p(A)$, are determined with the following attenuation factors according to the guidelines in ARI-885-98

2. 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 $\varnothing$ 200mm)

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

3. 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

4. Sound data is measured in a reverberation room at an independent sound laboratory, according to ISO-3741 and ISO-5135 standards.
5. 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 "-".
6. n/a Not applicable, static pressure < unit resistance
7. min ΔP_s . Unit resistance with fully opened damper blade

Pressure drop over unit : 100 Pa

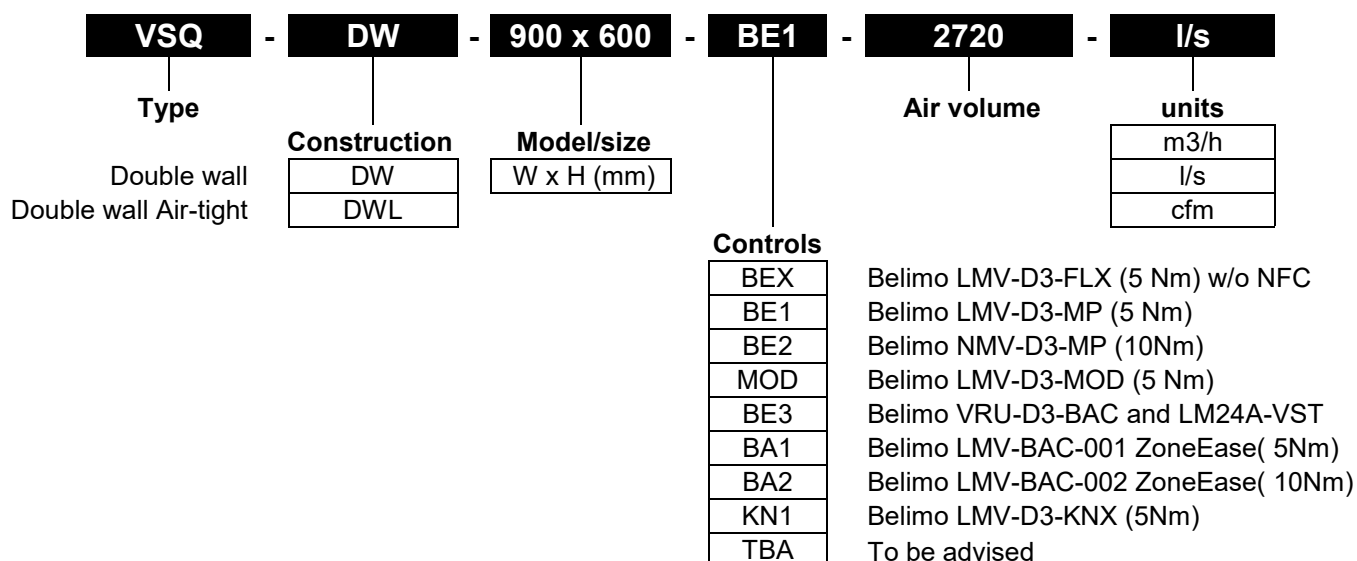
Model	Air Vel.	Air Volume			Min. P _{st}	Discharge sound (Air borne sound)									Radiated sound (Break out sound)								
						Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p			Lw (dB/oct) re 10 ⁻¹² W						Quick Sel. L _p		
							125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR	NC	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	dB (A)	NR
250x200	0,8	145	40	85	0	43	43	40	21	22	-	25	21	-	25	23	19	-	-	-	-	-	-
	3,0	540	150	318	3	49	50	46	33	34	26	31	28	-	31	30	25	-	-	-	-	-	-
equiv.	6,0	1080	300	635	12	53	56	51	41	41	35	34	31	-	35	36	30	23	21	21	-	-	-
ø250	9,0	1620	450	953	27	55	55	49	41	43	37	31	28	-	37	35	28	23	23	23	-	-	-
0,05m2	12,0	2160	600	1271	48	60	57	50	43	49	42	33	29	-	42	37	29	25	29	28	-	-	-
400x200	0,8	232	64	137	0	45	45	42	23	24	-	27	23	-	27	25	21	-	-	-	-	-	-
	3,0	864	240	508	3	51	52	48	35	36	28	31	28	-	33	32	27	-	-	-	-	-	-
equiv.	6,0	1728	480	1016	12	55	58	53	43	43	37	34	31	-	37	38	32	25	23	23	-	-	-
ø315	9,0	2592	720	1525	27	57	57	51	43	45	39	31	29	-	39	37	30	25	25	25	-	-	-
0,08m2	12,0	3456	960	2033	48	62	59	52	45	51	44	33	29	-	44	39	31	27	31	30	-	-	-
400x300	0,8	365	101	215	0	47	48	45	26	27	18	29	25	-	29	28	24	-	-	-	-	-	-
	3,0	1296	360	762	3	52	54	49	36	37	30	31	28	-	34	34	28	18	17	-	-	-	-
equiv.	6,0	2592	720	1525	12	57	60	55	45	45	39	34	31	-	39	40	34	27	25	25	-	-	-
ø400	9,0	3888	1080	2287	27	58	59	53	45	47	40	31	29	-	40	39	32	27	27	26	-	-	-
0,12m2	12,0	5184	1440	3049	48	64	61	54	47	53	46	33	29	-	46	41	33	29	33	32	-	-	-
400x400	0,8	464	129	273	0	48	48	45	26	27	18	30	26	-	30	28	24	-	-	-	-	-	-
	3,0	1728	480	1016	3	54	55	51	38	39	31	31	28	-	36	35	30	20	19	17	-	-	-
equiv.	6,0	3456	960	2033	12	58	61	56	46	46	40	34	31	-	40	41	35	28	26	26	-	-	-
ø450	9,0	5184	1440	3049	27	60	60	54	46	48	42	31	29	-	42	40	33	28	28	28	-	-	-
0,16m2	12,0	6912	1920	4066	48	65	62	55	48	54	47	33	29	-	47	42	34	30	34	33	-	-	-
500x400	0,8	580	161	341	0	50	50	47	27	28	19	31	27	-	32	30	26	-	-	-	-	-	-
	3,0	2160	600	1271	3	56	57	52	39	40	32	32	29	-	38	37	31	21	20	18	-	-	-
equiv.	6,0	4320	1200	2541	12	60	63	57	47	47	41	34	32	19	42	43	36	29	27	27	-	-	-
ø500	9,0	6480	1800	3812	27	61	62	56	47	49	43	32	30	-	43	42	35	29	29	29	-	-	-
0,20m2	12,0	8640	2400	5082	48	67	64	57	49	55	48	33	30	20	49	44	36	31	35	34	-	-	-
600x400	0,8	696	193	410	0	51	52	48	28	29	20	32	28	-	33	32	27	-	-	-	-	-	-
	3,0	2592	720	1525	3	57	59	54	40	40	33	33	30	-	39	39	33	22	20	19	-	-	-
equiv.	6,0	5184	1440	3049	12	62	65	59	48	48	42	35	33	20	44	45	38	30	28	28	-	-	-
ø560	9,0	7776	2160	4574	27	63	64	57	48	50	43	33	31	20	45	44	36	30	30	29	-	-	-
0,24m2	12,0	10368	2880	6099	48	69	65	58	50	56	49	34	31	21	51	45	37	32	36	35	-	-	-
800x400	0,8	928	258	546	0	54	54	50	29	31	21	33	30	-	36	34	29	-	-	-	-	-	-
	3,0	3456	960	2033	3	60	61	56	41	42	34	34	32	-	42	41	35	23	22	20	-	-	-
equiv.	6,0	6912	1920	4066	12	64	67	61	49	49	43	36	35	23	46	47	40	31	29	29	19	-	-
ø630	9,0	10368	2880	6099	27	66	66	59	49	51	45	34	32	23	48	46	38	31	31	31	-	-	-
0,32m2	12,0	13824	3840	8132	48	71	68	60	51	57	50	35	33	24	53	48	39	33	37	36	19	-	-
1000x400	0,8	1160	322	683	0	56	56	51	30	31	22	34	31	-	38	36	30	-	-	-	-	-	-
	3,0	4320	1200	2541	3	62	63	57	42	43	35	35	33	19	44	43	36	24	23	21	-	-	-
equiv.	6,0	8640	2400	5082	12	66	69	62	50	50	44	37	36	26	48	49	41	32	30	30	20	-	-
ø710	9,0	12960	3600	7624	27	68	68	60	50	52	46	35	33	25	50	48	39	32	32	32	-	-	-
0,40m2	12,0	17280	4800	10165	48	73	70	62	52	58	51	36	34	27	55	50	41	34	38	37	20	-	-
1000x500	0,8	1492	414	878	0	58	58	53	31	33	24	35	32	-	40	38	32	-	-	-	-	-	-
	3,0	5400	1500	3176	3	64	65	59	43	44	36	36	34	21	46	45	38	25	24	22	-	-	-
equiv.	6,0	10800	3000	6353	12	68	71	64	51	51	45	38	37	28	50	51	43	33	31	31	21	-	-
ø800	9,0	16200	4500	9529	27	69	70	62	51	53	47	36	34	27	51	50	41	33	33	33	19	-	-
0,50m2	12,0	21600	6000	12706	48	75	72	63	53	59	52	37	35	29	57	52	42	35	39	38	20	-	-
800x800	0,8	1923	534	1131	0	60	61	55	33	34	25	36	34	-	42	41	34	-	-	-	19	-	-
	3,0	6912	1920	4066	3	66	68	60	44	45	37	37	35	24	48	48	39	26	25	23	19	-	-
equiv.	6,0	13824	3840	8132	12	70	73	66	52	52	46	39	38	30	52	53	45	34	32	32	22	19	-
ø900	9,0	20736	5760	12198	27	72	72	64	52	54	48	37	36	30	54	52	43	34	34	34	20	-	-
0,64m2	12,0	27648	7680	16264	48	77	74	65	55	60	53	38	36	31	59	54	44	37	40	39	21	-	-

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		
		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																		
250x200	0,8	145	40	85	0	52	55	54	37	35	25	37	33	-	34	35	33	19	-	-	-	-	-
	3,0	540	150	318	3	51	53	49	37	37	29	34	31	-	33	33	28	19	-	-	-	-	-
equiv.	6,0	1080	300	635	12	63	67	65	56	53	46	45	43	23	45	47	44	38	33	32	29	24	-
ø250	9,0	1620	450	953	27	61	65	61	54	52	45	41	39	21	43	45	40	36	32	31	25	19	-
0,05m ²	12,0	2160	600	1271	48	61	64	60	54	53	46	39	37	20	43	44	39	36	33	32	23	-	-
400x200	0,8	232	64	137	0	54	57	56	39	37	27	39	36	-	36	37	35	21	-	-	-	-	-
	3,0	864	240	508	3	53	55	51	39	39	31	34	31	-	35	35	30	21	19	17	-	-	-
equiv.	6,0	1728	480	1016	12	65	69	67	58	55	48	45	43	25	47	49	46	40	35	34	29	24	-
ø315	9,0	2592	720	1525	27	63	67	63	56	54	47	41	39	23	45	47	42	38	34	33	25	19	-
0,08m ²	12,0	3456	960	2033	48	63	66	62	56	55	48	39	37	23	45	46	41	38	35	34	23	-	-
400x300	0,8	365	101	215	0	55	57	56	39	37	27	40	36	-	37	37	35	21	17	-	-	-	-
	3,0	1296	360	762	3	55	57	53	41	40	33	34	31	-	37	37	32	23	20	19	-	-	-
equiv.	6,0	2592	720	1525	12	66	71	68	60	57	49	45	43	27	48	51	47	42	37	35	29	24	-
ø400	9,0	3888	1080	2287	27	65	69	65	58	55	49	41	39	25	47	49	44	40	35	35	25	19	-
0,12m ²	12,0	5184	1440	3049	48	65	68	64	58	57	50	39	37	25	47	48	43	40	37	36	23	-	-
400x400	0,8	464	129	273	0	57	60	59	42	40	30	42	39	-	39	40	38	24	20	-	-	-	-
	3,0	1728	480	1016	3	56	58	54	42	42	34	34	32	-	38	38	33	24	22	20	-	-	-
equiv.	6,0	3456	960	2033	12	68	72	70	61	58	51	45	43	29	50	52	49	43	38	37	29	24	-
ø450	9,0	5184	1440	3049	27	66	70	66	59	57	50	41	39	26	48	50	45	41	37	36	25	20	-
0,16m ²	12,0	6912	1920	4066	48	66	69	65	59	58	51	39	37	26	48	49	44	41	38	37	23	-	-
500x400	0,8	580	161	341	0	59	62	61	43	41	31	43	40	-	41	42	40	25	21	-	-	-	-
	3,0	2160	600	1271	3	58	60	56	43	43	35	35	33	-	40	40	35	25	23	21	-	-	-
equiv.	6,0	4320	1200	2541	12	70	74	71	62	59	52	46	44	31	52	54	50	44	39	38	30	25	19
ø500	9,0	6480	1800	3812	27	68	72	67	60	58	51	42	40	29	50	52	46	42	38	37	25	21	-
0,20m ²	12,0	8640	2400	5082	48	68	71	66	60	59	52	40	38	28	50	51	45	42	39	38	24	19	-
600x400	0,8	696	193	410	0	61	63	62	44	41	31	44	41	19	43	43	41	26	21	17	27	24	-
	3,0	2592	720	1525	3	60	62	57	44	44	36	36	34	-	42	42	36	26	24	22	19	-	-
equiv.	6,0	5184	1440	3049	12	71	75	72	63	60	52	47	45	33	53	55	51	45	40	38	30	26	21
ø560	9,0	7776	2160	4574	27	69	73	69	61	58	52	42	41	31	51	53	48	43	38	38	26	22	-
0,24m ²	12,0	10368	2880	6099	48	70	73	68	61	60	53	41	39	30	52	53	47	43	40	39	24	20	-
800x400	0,8	928	258	546	0	64	66	64	45	43	33	45	42	22	46	46	43	27	23	19	28	24	-
	3,0	3456	960	2033	3	62	64	59	45	45	37	37	35	20	44	44	38	27	25	23	20	-	-
equiv.	6,0	6912	1920	4066	12	74	78	74	64	61	54	48	46	36	56	58	53	46	41	40	31	27	23
ø630	9,0	10368	2880	6099	27	72	76	71	62	60	53	43	42	34	54	56	50	44	40	39	27	23	21
0,32m ²	12,0	13824	3840	8132	48	72	75	70	62	61	54	42	41	33	54	55	49	44	41	40	25	21	20
1000x400	0,8	1160	322	683	0	65	68	66	46	44	34	46	43	24	47	48	45	28	24	20	29	25	-
	3,0	4320	1200	2541	3	64	66	61	46	46	38	38	36	22	46	46	40	28	26	24	21	-	-
equiv.	6,0	8640	2400	5082	12	76	80	76	65	62	55	48	47	38	58	60	55	47	42	41	32	28	25
ø710	9,0	12960	3600	7624	27	74	78	72	63	61	54	44	43	36	56	58	51	45	41	40	27	24	23
0,40m ²	12,0	17280	4800	10165	48	74	77	71	63	62	55	43	42	35	56	57	50	45	42	41	26	22	23
1000x500	0,8	1492	414	878	0	67	69	66	46	44	34	46	43	25	49	49	45	28	24	20	29	24	-
	3,0	5400	1500	3176	3	66	68	62	47	47	39	39	37	25	48	48	41	29	27	25	22	-	-
equiv.	6,0	10800	3000	6353	12	78	82	78	66	63	56	49	49	41	60	62	57	48	43	42	32	29	28
ø800	9,0	16200	4500	9529	27	76	80	74	64	62	55	45	45	38	58	60	53	46	42	41	28	25	25
0,50m ²	12,0	21600	6000	12706	48	76	79	73	64	63	56	43	43	38	58	59	52	46	43	42	27	24	25
800x800	0,8	1923	534	1131	0	69	71	68	46	45	35	46	44	27	51	51	47	28	25	21	29	25	-
	3,0	6912	1920	4066	3	68	70	64	48	48	40	40	38	27	50	50	43	30	28	26	22	19	-
equiv.	6,0	13824	3840	8132	12	80	84	79	68	64	57	50	50	43	62	64	58	50	44	43	33	30	30
ø900	9,0	20736	5760	12198	27	78	82	76	65	63	56	46	46	41	60	62	55	47	43	42	29	26	28
0,64m ²	12,0	27648	7680	16264	48	78	81	74	65	64	57	44	44	40	60	61	53	47	44	43	27	25	27

Pressure drop over unit : 300 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	m³/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
250x200	0,8	145	40	85	0	56	59	60	43	39	29	42	39	-	38	39	39	25	19	-	-	-	-
	3,0	540	150	318	3	54	57	54	42	41	33	38	35	-	36	37	33	24	21	19	22	-	-
equiv.	6,0	1080	300	635	12	64	68	67	59	55	47	47	44	25	46	48	46	41	35	33	31	26	-
ø250	9,0	1620	450	953	27	69	74	73	67	62	54	51	49	31	51	54	52	49	42	40	36	31	21
0,05m²	12,0	2160	600	1271	48	69	74	72	68	62	56	50	47	32	51	54	51	50	42	42	34	29	20
400x200	0,8	232	64	137	0	58	61	62	45	41	31	44	41	-	40	41	41	27	21	-	-	-	-
	3,0	864	240	508	3	56	59	56	44	43	35	38	35	-	38	39	35	26	23	21	22	-	-
equiv.	6,0	1728	480	1016	12	66	71	69	61	57	49	47	45	27	48	51	48	43	37	35	31	26	-
ø315	9,0	2592	720	1525	27	71	76	75	69	64	57	51	49	34	53	56	54	51	44	43	36	31	23
0,08m²	12,0	3456	960	2033	48	71	76	74	70	64	58	50	48	34	53	56	53	52	44	44	34	29	23
400x300	0,8	365	101	215	0	61	64	65	48	44	34	47	44	19	43	44	44	30	24	20	31	28	-
	3,0	1296	360	762	3	58	61	58	46	44	37	38	35	-	40	41	37	28	24	23	22	-	-
equiv.	6,0	2592	720	1525	12	68	72	71	63	58	51	47	45	29	50	52	50	45	38	37	31	26	19
ø400	9,0	3888	1080	2287	27	73	78	76	71	65	58	51	49	36	55	58	55	53	45	44	36	31	25
0,12m²	12,0	5184	1440	3049	48	73	78	76	71	66	60	50	48	36	55	58	55	53	46	46	34	29	24
400x400	0,8	464	129	273	0	61	64	65	48	44	34	47	44	20	43	44	44	30	24	20	31	28	-
	3,0	1728	480	1016	3	59	62	59	47	46	38	38	35	-	41	42	38	29	26	24	22	-	-
equiv.	6,0	3456	960	2033	12	69	74	72	64	60	52	47	45	31	51	54	51	46	40	38	31	26	20
ø450	9,0	5184	1440	3049	27	74	79	78	72	67	60	51	49	37	56	59	57	54	47	46	36	31	27
0,16m²	12,0	6912	1920	4066	48	74	79	77	73	67	61	50	48	37	56	59	56	55	47	47	34	29	26
500x400	0,8	580	161	341	0	63	66	66	49	45	35	48	45	22	45	46	45	31	25	21	32	29	-
	3,0	2160	600	1271	3	61	64	61	48	47	39	39	37	20	43	44	40	30	27	25	22	-	-
equiv.	6,0	4320	1200	2541	12	71	75	73	65	61	53	48	46	33	53	55	52	47	41	39	32	27	22
ø500	9,0	6480	1800	3812	27	76	81	79	73	68	61	52	50	40	58	61	58	55	48	47	36	31	28
0,20m²	12,0	8640	2400	5082	48	76	81	79	74	68	62	50	49	40	58	61	58	56	48	48	35	29	28
600x400	0,8	696	193	410	0	65	67	68	50	46	36	49	46	24	47	47	47	32	26	22	32	29	-
	3,0	2592	720	1525	3	63	66	62	49	47	40	40	37	22	45	46	41	31	27	26	23	-	-
equiv.	6,0	5184	1440	3049	12	73	77	75	66	61	54	49	47	35	55	57	54	48	41	40	32	27	23
ø560	9,0	7776	2160	4574	27	77	83	80	74	68	61	52	51	42	59	63	59	56	48	47	37	32	30
0,24m²	12,0	10368	2880	6099	48	77	83	80	74	69	63	51	50	42	59	63	59	56	49	49	35	30	29
800x400	0,8	928	258	546	0	67	70	70	51	47	37	50	47	27	49	50	49	33	27	23	33	30	-
	3,0	3456	960	2033	3	65	68	64	50	49	41	41	39	25	47	48	43	32	29	27	24	20	-
equiv.	6,0	6912	1920	4066	12	75	80	77	67	63	55	50	48	38	57	60	56	49	43	41	33	29	25
ø630	9,0	10368	2880	6099	27	80	85	82	75	70	63	53	52	45	62	65	61	57	50	49	37	33	32
0,32m²	12,0	13824	3840	8132	48	80	85	82	76	70	64	52	51	45	62	65	61	58	50	50	36	32	32
1000x400	0,8	1160	322	683	0	69	72	71	52	48	38	51	48	29	51	52	50	34	28	24	34	31	19
	3,0	4320	1200	2541	3	67	70	65	51	50	42	42	40	27	49	50	44	33	30	28	25	21	-
equiv.	6,0	8640	2400	5082	12	77	81	78	68	64	56	50	49	40	59	61	57	50	44	42	34	30	27
ø710	9,0	12960	3600	7624	27	82	87	84	76	71	64	54	53	47	64	67	63	58	51	50	38	34	34
0,40m²	12,0	17280	4800	10165	48	82	87	83	77	71	65	53	52	47	64	67	62	59	51	51	37	33	34
1000x500	0,8	1492	414	878	0	72	74	74	54	50	40	52	49	32	54	54	53	36	30	26	35	32	22
	3,0	5400	1500	3176	3	69	72	67	52	51	43	42	41	29	51	52	46	34	31	29	25	22	-
equiv.	6,0	10800	3000	6353	12	79	83	80	69	65	57	51	50	43	61	63	59	51	45	43	34	31	30
ø800	9,0	16200	4500	9529	27	84	89	86	77	72	64	55	55	49	66	69	65	59	52	50	39	35	36
0,50m²	12,0	21600	6000	12706	48	84	89	85	78	72	66	54	53	49	66	69	64	60	52	52	37	34	36
800x800	0,8	1923	534	1131	0	74	77	76	55	51	41	53	51	35	56	57	55	37	31	27	36	33	24
	3,0	6912	1920	4066	3	71	74	69	53	52	44	43	42	32	53	54	48	35	32	30	26	23	19
equiv.	6,0	13824	3840	8132	12	81	86	81	70	66	58	52	52	45	63	66	60	52	46	44	35	32	32
ø900	9,0	20736	5760	12198	27	86	91	87	78	73	66	56	56	52	68	71	66	60	53	52	39	36	39
0,64m²	12,0	27648	7680	16264	48	86	91	87	79	73	67	54	55	52	68	71	66	61	53	53	38	35	39



Specify as:

Example:

Supply and install, VAV terminal, double wall construction, from 1.2mm thick galvanized sheet steel, with 30mm duct flanges. Casing leakage EN-1751 Class-B. The VAV units should have a low leakage, opposed blade damper with 100mm pitch and aluminium damper shaft 10x10mm with self lubricating Nylon bearings and averaging airflow sensor type FloXact®. For:

Air volume	 m ³ /h
Unit size (w x h)	 X mm
Max. pressure loss	 Pa
Max. discharge SPL	 dB(A)
Max. radiated SPL	 dB(A)
Controller	Belimo LMV-D3-MP (factory fitted and calibrated)
Manufacturer	AIR-CONCEPTS BV
Type	VSQ-DW-xxx-BE1-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.



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