

## 1.2.1 Rectangular, single wall VAV terminals

# VSQ-SW(L)



**AirConcepts**

AIRFLOW MEASUREMENT AND CONTROL

## 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 (CO<sub>2</sub> and/ or PM<sub>5</sub>) or control pressure in the room.



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

## Design features

### Casing

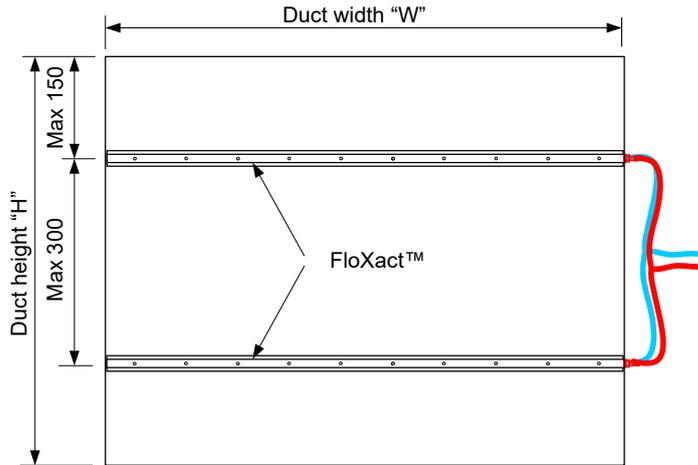
- Ridged galvanised Magnelis® steel construction (1.2mm). Magnelis has a very smooth crystalline surface structure and is 3x more corrosion proof than regular galvanized steel.
- Flanges: 30mm, corner holes ø8x21mm, suitable for 20 to 30mm duct flanges.
- Standard damper blade (SW), steel construction, 100mm pitch, air-tightness EN 1751 Class 2
- Air-Tight damper blade (SWL), 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™

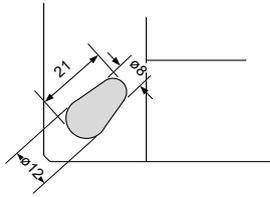


### Distribution multiple FloXact™ probes in VSQ units

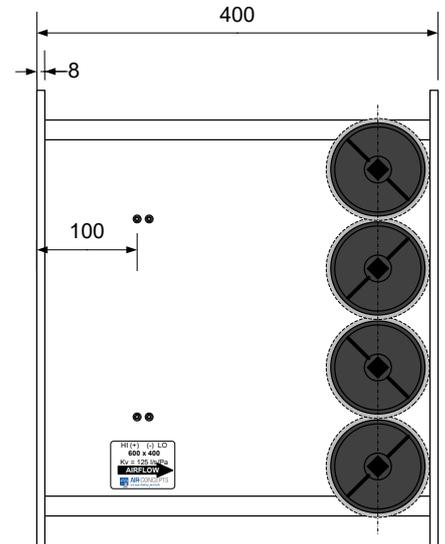
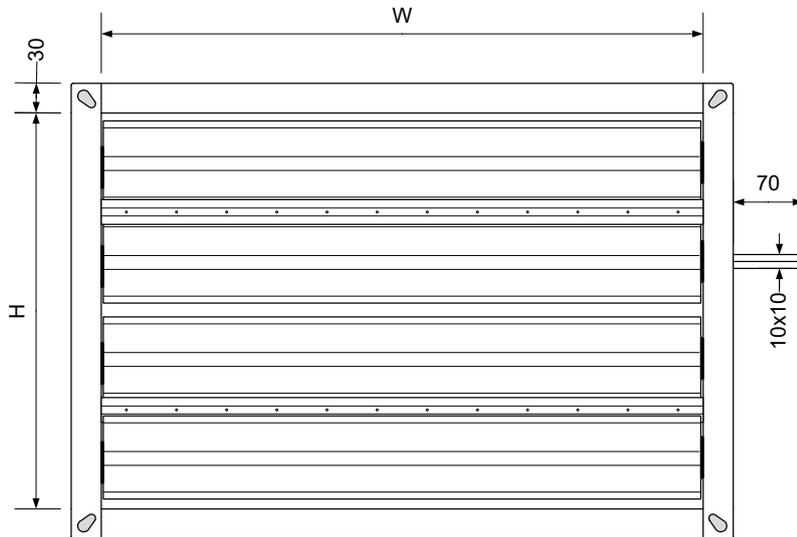
### Kv Values FloXact™ in L/s.Pa

| Duct | N°       | Duct or unit width "W"         |      |      |      |      |      |      |      |      |      |     |      |      |      |
|------|----------|--------------------------------|------|------|------|------|------|------|------|------|------|-----|------|------|------|
|      |          | 200                            | 250  | 300  | 350  | 400  | 450  | 500  | 600  | 700  | 800  | 900 | 1000 | 1100 | 1200 |
| "H"  | FloXact™ | K <sub>v</sub> 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  |          | 101                            | 127  | 152  | 177  | 203  | 228  | 253  | 304  | 354  | 405  | 456 | 506  | 557  | 608  |
| 700  | 3        | 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<sub>v</sub> = K<sub>v</sub> value in l/s/Pa
  - P<sub>fs</sub> = pressure difference measured by the FloXact™ in Pa
- The table above is for air with 1.20 kg/m<sup>3</sup> 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-SW (single wall construction), drawn model 600x400

### Accessories / Optional

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

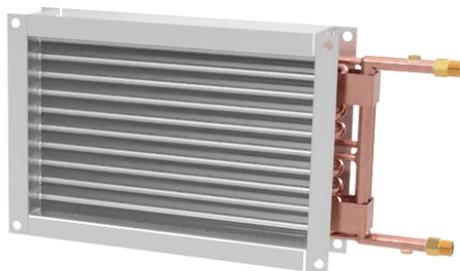
- Standard Controls:
  - BE1 Belimo LMV-D3-MP. 5Nm, 0-10V with NFC
  - BEX Belimo LMV0D3-FLX. 5Nm, 0-10V without NFC
  - BEM Belimo LMV-D3-MOD. 5Nm, MODbus/BACnet
  - BA1 Belimo LMV-BAC-001. 5Nm, ZoneEase BACnet
  - BA2 Belimo LMV-BAC-002. 5Nm, ZoneEase BACnet
 The above controllers are factory mounted, 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)



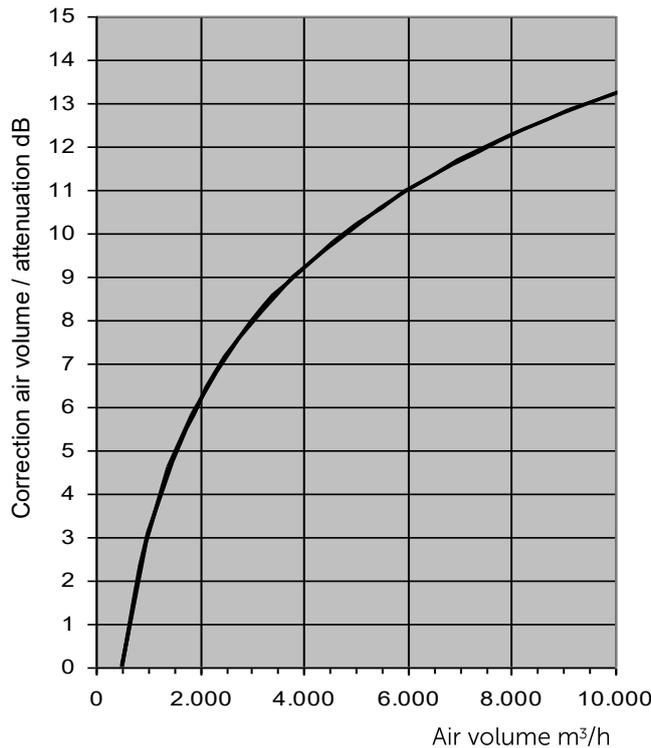
HWQ-2R-400x250

### Sound data dB(A) and NR

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

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

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



- 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 |

- 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  $\Delta P_s$ . Unit resistance with fully opened damper blade

### Sound data NC

- The sound pressure levels  $L_p(A)$ , 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  $\varnothing$ 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 |

- 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  $\Delta P_s$ . Unit resistance with fully opened damper blade

Pressure drop over unit : 100 Pa

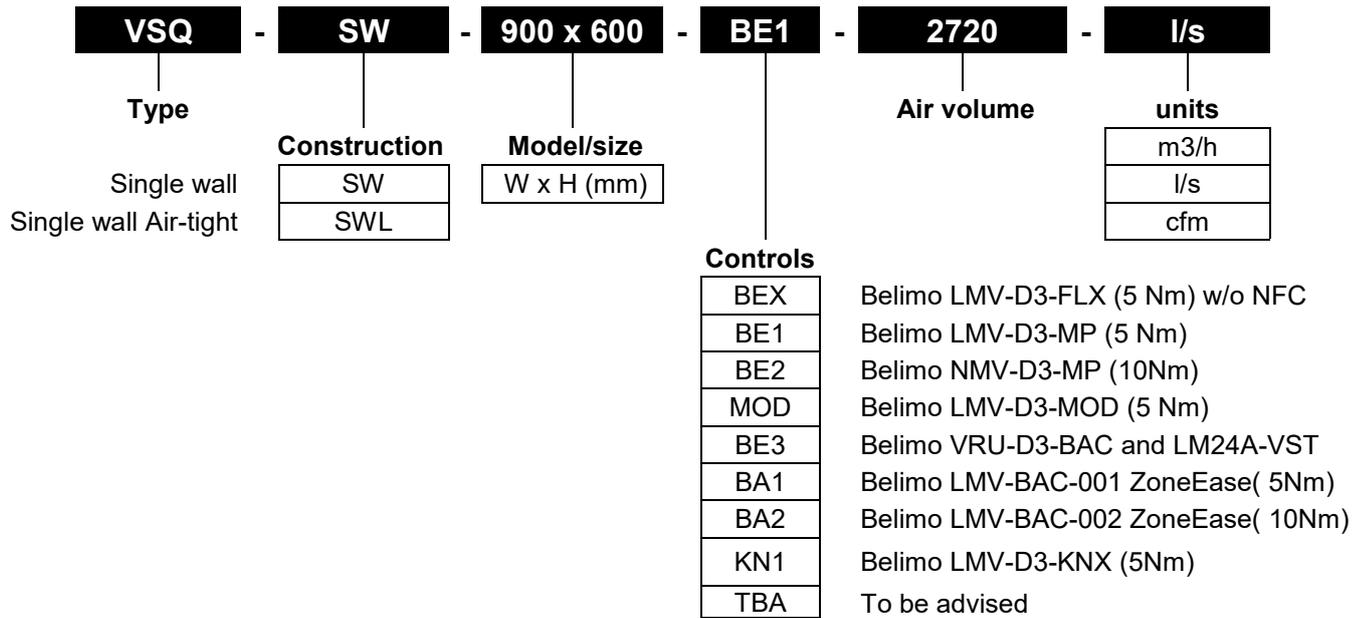
| Model<br><br>mm    | Air Volume             |                   |      |       | Min.<br>P <sub>st</sub><br><br>Pa | Discharge sound<br>(Air borne sound) |           |           |          |          |          |                           |    |    | Radiated sound<br>(Break out sound) |          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

Pressure drop over unit : 200 Pa

| Model    | Air Vel.           | Air Volume        |       |      | Min. P <sub>st</sub> | Discharge sound (Air borne sound)  |     |     |    |    |    |                           |    |    | Radiated sound (Break out sound)   |     |     |    |    |    |                           |    |    |    |
|----------|--------------------|-------------------|-------|------|----------------------|------------------------------------|-----|-----|----|----|----|---------------------------|----|----|------------------------------------|-----|-----|----|----|----|---------------------------|----|----|----|
|          |                    |                   |       |      |                      | Lw (dB/oct) re 10 <sup>-12</sup> W |     |     |    |    |    | Quick Sel. L <sub>p</sub> |    |    | Lw (dB/oct) re 10 <sup>-12</sup> W |     |     |    |    |    | Quick Sel. L <sub>p</sub> |    |    |    |
|          |                    |                   |       |      |                      | 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)                       |    |    |    |
| mm       | m/s                | m <sup>3</sup> /h | l/s   | CFM  | Pa                   | 125                                | 250 | 500 | 1k | 2k | 4k | dB                        | NR | NC | 125                                | 250 | 500 | 1k | 2k | 4k | dB                        | NR | NC |    |
| 250x200  | 0,8                | 145               | 40    | 85   | 0                    | 52                                 | 55  | 54  | 37 | 35 | 25 | 37                        | 33 | -  | 38                                 | 39  | 37  | 23 | 19 | -  | -                         | -  |    |    |
|          | 3,0                | 540               | 150   | 318  | 3                    | 51                                 | 53  | 49  | 37 | 37 | 29 | 34                        | 31 | -  | 37                                 | 37  | 32  | 23 | 21 | 21 | 22                        | -  | -  |    |
|          | equiv.             | 6,0               | 1080  | 300  | 635                  | 12                                 | 63  | 67  | 65 | 56 | 53 | 46                        | 45 | 43 | 23                                 | 49  | 51  | 48 | 42 | 37 | 38                        | 33 | 28 | -  |
|          | ø250               | 9,0               | 1620  | 450  | 953                  | 27                                 | 61  | 65  | 61 | 54 | 52 | 45                        | 41 | 39 | 21                                 | 47  | 49  | 44 | 40 | 36 | 37                        | 29 | 24 | -  |
|          | 0,05m <sup>2</sup> | 12,0              | 2160  | 600  | 1271                 | 48                                 | 61  | 64  | 60 | 54 | 53 | 46                        | 39 | 37 | 20                                 | 47  | 48  | 43 | 40 | 37 | 38                        | 27 | 22 | -  |
| 400x200  | 0,8                | 232               | 64    | 137  | 0                    | 54                                 | 57  | 56  | 39 | 37 | 27 | 39                        | 36 | -  | 40                                 | 41  | 39  | 25 | 21 | 19 | 27                        | 23 | -  |    |
|          | 3,0                | 864               | 240   | 508  | 3                    | 53                                 | 55  | 51  | 39 | 39 | 31 | 34                        | 31 | -  | 39                                 | 39  | 34  | 25 | 23 | 23 | 22                        | -  | -  |    |
|          | equiv.             | 6,0               | 1728  | 480  | 1016                 | 12                                 | 65  | 69  | 67 | 58 | 55 | 48                        | 45 | 43 | 25                                 | 51  | 53  | 50 | 44 | 39 | 40                        | 33 | 28 | 19 |
|          | ø315               | 9,0               | 2592  | 720  | 1525                 | 27                                 | 63  | 67  | 63 | 56 | 54 | 47                        | 41 | 39 | 23                                 | 49  | 51  | 46 | 42 | 38 | 39                        | 29 | 24 | -  |
|          | 0,08m <sup>2</sup> | 12,0              | 3456  | 960  | 2033                 | 48                                 | 63  | 66  | 62 | 56 | 55 | 48                        | 39 | 37 | 23                                 | 49  | 50  | 45 | 42 | 39 | 40                        | 27 | 22 | -  |
| 400x300  | 0,8                | 365               | 101   | 215  | 0                    | 55                                 | 57  | 56  | 39 | 37 | 27 | 40                        | 36 | -  | 41                                 | 41  | 39  | 25 | 21 | 19 | 27                        | 23 | -  |    |
|          | 3,0                | 1296              | 360   | 762  | 3                    | 55                                 | 57  | 53  | 41 | 40 | 33 | 34                        | 31 | -  | 41                                 | 41  | 36  | 27 | 24 | 25 | 22                        | -  | -  |    |
|          | equiv.             | 6,0               | 2592  | 720  | 1525                 | 12                                 | 66  | 71  | 68 | 60 | 57 | 49                        | 45 | 43 | 27                                 | 52  | 55  | 51 | 46 | 41 | 41                        | 33 | 28 | 21 |
|          | ø400               | 9,0               | 3888  | 1080 | 2287                 | 27                                 | 65  | 69  | 65 | 58 | 55 | 49                        | 41 | 39 | 25                                 | 51  | 53  | 48 | 44 | 39 | 41                        | 29 | 24 | -  |
|          | 0,12m <sup>2</sup> | 12,0              | 5184  | 1440 | 3049                 | 48                                 | 65  | 68  | 64 | 58 | 57 | 50                        | 39 | 37 | 25                                 | 51  | 52  | 47 | 44 | 41 | 42                        | 27 | 22 | -  |
| 400x400  | 0,8                | 464               | 129   | 273  | 0                    | 57                                 | 60  | 59  | 42 | 40 | 30 | 42                        | 39 | -  | 43                                 | 44  | 42  | 28 | 24 | 22 | 30                        | 26 | -  |    |
|          | 3,0                | 1728              | 480   | 1016 | 3                    | 56                                 | 58  | 54  | 42 | 42 | 34 | 34                        | 32 | -  | 42                                 | 42  | 37  | 28 | 26 | 26 | 22                        | -  | -  |    |
|          | equiv.             | 6,0               | 3456  | 960  | 2033                 | 12                                 | 68  | 72  | 70 | 61 | 58 | 51                        | 45 | 43 | 29                                 | 54  | 56  | 53 | 47 | 42 | 43                        | 33 | 28 | 22 |
|          | ø450               | 9,0               | 5184  | 1440 | 3049                 | 27                                 | 66  | 70  | 66 | 59 | 57 | 50                        | 41 | 39 | 26                                 | 52  | 54  | 49 | 45 | 41 | 42                        | 29 | 24 | -  |
|          | 0,16m <sup>2</sup> | 12,0              | 6912  | 1920 | 4066                 | 48                                 | 66  | 69  | 65 | 59 | 58 | 51                        | 39 | 37 | 26                                 | 52  | 53  | 48 | 45 | 42 | 43                        | 27 | 22 | -  |
| 500x400  | 0,8                | 580               | 161   | 341  | 0                    | 59                                 | 62  | 61  | 43 | 41 | 31 | 43                        | 40 | -  | 45                                 | 46  | 44  | 29 | 25 | 23 | 31                        | 27 | -  |    |
|          | 3,0                | 2160              | 600   | 1271 | 3                    | 58                                 | 60  | 56  | 43 | 43 | 35 | 35                        | 33 | -  | 44                                 | 44  | 39  | 29 | 27 | 27 | 22                        | -  | -  |    |
|          | equiv.             | 6,0               | 4320  | 1200 | 2541                 | 12                                 | 70  | 74  | 71 | 62 | 59 | 52                        | 46 | 44 | 31                                 | 56  | 58  | 54 | 48 | 43 | 44                        | 34 | 29 | 24 |
|          | ø500               | 9,0               | 6480  | 1800 | 3812                 | 27                                 | 68  | 72  | 67 | 60 | 58 | 51                        | 42 | 40 | 29                                 | 54  | 56  | 50 | 46 | 42 | 43                        | 29 | 25 | 21 |
|          | 0,20m <sup>2</sup> | 12,0              | 8640  | 2400 | 5082                 | 48                                 | 68  | 71  | 66 | 60 | 59 | 52                        | 40 | 38 | 28                                 | 54  | 55  | 49 | 46 | 43 | 44                        | 28 | 23 | 20 |
| 600x400  | 0,8                | 696               | 193   | 410  | 0                    | 61                                 | 63  | 62  | 44 | 41 | 31 | 44                        | 41 | 19 | 47                                 | 47  | 45  | 30 | 25 | 23 | 31                        | 28 | -  |    |
|          | 3,0                | 2592              | 720   | 1525 | 3                    | 60                                 | 62  | 57  | 44 | 44 | 36 | 36                        | 34 | -  | 46                                 | 46  | 40  | 30 | 28 | 28 | 23                        | -  | -  |    |
|          | equiv.             | 6,0               | 5184  | 1440 | 3049                 | 12                                 | 71  | 75  | 72 | 63 | 60 | 52                        | 47 | 45 | 33                                 | 57  | 59  | 55 | 49 | 44 | 44                        | 34 | 30 | 25 |
|          | ø560               | 9,0               | 7776  | 2160 | 4574                 | 27                                 | 69  | 73  | 69 | 61 | 58 | 52                        | 42 | 41 | 31                                 | 55  | 57  | 52 | 47 | 42 | 44                        | 30 | 26 | 22 |
|          | 0,24m <sup>2</sup> | 12,0              | 10368 | 2880 | 6099                 | 48                                 | 70  | 73  | 68 | 61 | 60 | 53                        | 41 | 39 | 30                                 | 56  | 57  | 51 | 47 | 44 | 45                        | 28 | 24 | 22 |
| 800x400  | 0,8                | 928               | 258   | 546  | 0                    | 64                                 | 66  | 64  | 45 | 43 | 33 | 45                        | 42 | 22 | 50                                 | 50  | 47  | 31 | 27 | 25 | 32                        | 29 | -  |    |
|          | 3,0                | 3456              | 960   | 2033 | 3                    | 62                                 | 64  | 59  | 45 | 45 | 37 | 37                        | 35 | 20 | 48                                 | 48  | 42  | 31 | 29 | 29 | 24                        | 20 | -  |    |
|          | equiv.             | 6,0               | 6912  | 1920 | 4066                 | 12                                 | 74  | 78  | 74 | 64 | 61 | 54                        | 48 | 46 | 36                                 | 60  | 62  | 57 | 50 | 45 | 46                        | 35 | 31 | 28 |
|          | ø630               | 9,0               | 10368 | 2880 | 6099                 | 27                                 | 72  | 76  | 71 | 62 | 60 | 53                        | 43 | 42 | 34                                 | 58  | 60  | 54 | 48 | 44 | 45                        | 31 | 27 | 25 |
|          | 0,32m <sup>2</sup> | 12,0              | 13824 | 3840 | 8132                 | 48                                 | 72  | 75  | 70 | 62 | 61 | 54                        | 42 | 41 | 33                                 | 58  | 59  | 53 | 48 | 45 | 46                        | 29 | 26 | 25 |
| 1000x400 | 0,8                | 1160              | 322   | 683  | 0                    | 65                                 | 68  | 66  | 46 | 44 | 34 | 46                        | 43 | 24 | 51                                 | 52  | 49  | 32 | 28 | 26 | 33                        | 29 | -  |    |
|          | 3,0                | 4320              | 1200  | 2541 | 3                    | 64                                 | 66  | 61  | 46 | 46 | 38 | 38                        | 36 | 22 | 50                                 | 50  | 44  | 32 | 30 | 30 | 25                        | 21 | -  |    |
|          | equiv.             | 6,0               | 8640  | 2400 | 5082                 | 12                                 | 76  | 80  | 76 | 65 | 62 | 55                        | 48 | 47 | 38                                 | 62  | 64  | 59 | 51 | 46 | 47                        | 36 | 32 | 30 |
|          | ø710               | 9,0               | 12960 | 3600 | 7624                 | 27                                 | 74  | 78  | 72 | 63 | 61 | 54                        | 44 | 43 | 36                                 | 60  | 62  | 55 | 49 | 45 | 46                        | 32 | 28 | 28 |
|          | 0,40m <sup>2</sup> | 12,0              | 17280 | 4800 | 10165                | 48                                 | 74  | 77  | 71 | 63 | 62 | 55                        | 43 | 42 | 35                                 | 60  | 61  | 54 | 49 | 46 | 47                        | 30 | 27 | 27 |
| 1000x500 | 0,8                | 1492              | 414   | 878  | 0                    | 67                                 | 69  | 66  | 46 | 44 | 34 | 46                        | 43 | 25 | 53                                 | 53  | 49  | 32 | 28 | 26 | 33                        | 28 | -  |    |
|          | 3,0                | 5400              | 1500  | 3176 | 3                    | 66                                 | 68  | 62  | 47 | 47 | 39 | 39                        | 37 | 25 | 52                                 | 52  | 45  | 33 | 31 | 31 | 26                        | 22 | -  |    |
|          | equiv.             | 6,0               | 10800 | 3000 | 6353                 | 12                                 | 78  | 82  | 78 | 66 | 63 | 56                        | 49 | 49 | 41                                 | 64  | 66  | 61 | 52 | 47 | 48                        | 37 | 33 | 32 |
|          | ø800               | 9,0               | 16200 | 4500 | 9529                 | 27                                 | 76  | 80  | 74 | 64 | 62 | 55                        | 45 | 45 | 38                                 | 62  | 64  | 57 | 50 | 46 | 47                        | 32 | 30 | 30 |
|          | 0,50m <sup>2</sup> | 12,0              | 21600 | 6000 | 12706                | 48                                 | 76  | 79  | 73 | 64 | 63 | 56                        | 43 | 43 | 38                                 | 62  | 63  | 56 | 50 | 47 | 48                        | 31 | 28 | 30 |
| 800x800  | 0,8                | 1923              | 534   | 1131 | 0                    | 69                                 | 71  | 68  | 46 | 45 | 35 | 46                        | 44 | 27 | 55                                 | 55  | 51  | 32 | 29 | 27 | 33                        | 29 | 20 |    |
|          | 3,0                | 6912              | 1920  | 4066 | 3                    | 68                                 | 70  | 64  | 48 | 48 | 40 | 40                        | 38 | 27 | 54                                 | 54  | 47  | 34 | 32 | 32 | 26                        | 23 | 19 |    |
|          | equiv.             | 6,0               | 13824 | 3840 | 8132                 | 12                                 | 80  | 84  | 79 | 68 | 64 | 57                        | 50 | 50 | 43                                 | 66  | 68  | 62 | 54 | 48 | 49                        | 37 | 35 | 35 |
|          | ø900               | 9,0               | 20736 | 5760 | 12198                | 27                                 | 78  | 82  | 76 | 65 | 63 | 56                        | 46 | 46 | 41                                 | 64  | 66  | 59 | 51 | 47 | 48                        | 33 | 31 | 32 |
|          | 0,64m <sup>2</sup> | 12,0              | 27648 | 7680 | 16264                | 48                                 | 78  | 81  | 74 | 65 | 64 | 57                        | 44 | 44 | 40                                 | 64  | 65  | 57 | 51 | 48 | 49                        | 31 | 29 | 32 |

Pressure drop over unit : 300 Pa

| Model    | Air Vel.           | Air Volume        |       |      | Min. P <sub>st</sub> | Discharge sound (Air borne sound)  |     |     |    |    |    |                           |    |    | Radiated sound (Break out sound)   |     |     |    |    |    |                           |    |    |    |
|----------|--------------------|-------------------|-------|------|----------------------|------------------------------------|-----|-----|----|----|----|---------------------------|----|----|------------------------------------|-----|-----|----|----|----|---------------------------|----|----|----|
|          |                    |                   |       |      |                      | Lw (dB/oct) re 10 <sup>-12</sup> W |     |     |    |    |    | Quick Sel. L <sub>p</sub> |    |    | Lw (dB/oct) re 10 <sup>-12</sup> W |     |     |    |    |    | Quick Sel. L <sub>p</sub> |    |    |    |
|          |                    |                   |       |      |                      | 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)                       |    |    |    |
| mm       | m/s                | m <sup>3</sup> /h | l/s   | CFM  | Pa                   | 125                                | 250 | 500 | 1k | 2k | 4k | dB                        | NR | NC | 125                                | 250 | 500 | 1k | 2k | 4k | dB                        | NR | NC |    |
| 250x200  | 0,8                | 145               | 40    | 85   | 0                    | 56                                 | 59  | 60  | 43 | 39 | 29 | 42                        | 39 | -  | 42                                 | 43  | 43  | 29 | 23 | 21 | 30                        | 27 | -  |    |
|          | 3,0                | 540               | 150   | 318  | 3                    | 54                                 | 57  | 54  | 42 | 41 | 33 | 38                        | 35 | -  | 40                                 | 41  | 37  | 28 | 25 | 25 | 26                        | 20 | -  |    |
|          | equiv.             | 6,0               | 1080  | 300  | 635                  | 12                                 | 64  | 68  | 67 | 59 | 55 | 47                        | 47 | 44 | 25                                 | 50  | 52  | 50 | 45 | 39 | 39                        | 35 | 30 | 19 |
|          | ø250               | 9,0               | 1620  | 450  | 953                  | 27                                 | 69  | 74  | 73 | 67 | 62 | 54                        | 51 | 49 | 31                                 | 55  | 58  | 56 | 53 | 46 | 46                        | 40 | 35 | 25 |
|          | 0,05m <sup>2</sup> | 12,0              | 2160  | 600  | 1271                 | 48                                 | 69  | 74  | 72 | 68 | 62 | 56                        | 50 | 47 | 32                                 | 55  | 58  | 55 | 54 | 46 | 48                        | 39 | 33 | 25 |
| 400x200  | 0,8                | 232               | 64    | 137  | 0                    | 58                                 | 61  | 62  | 45 | 41 | 31 | 44                        | 41 | -  | 44                                 | 45  | 45  | 31 | 25 | 23 | 32                        | 29 | -  |    |
|          | 3,0                | 864               | 240   | 508  | 3                    | 56                                 | 59  | 56  | 44 | 43 | 35 | 38                        | 35 | -  | 42                                 | 43  | 39  | 30 | 27 | 27 | 26                        | 20 | -  |    |
|          | equiv.             | 6,0               | 1728  | 480  | 1016                 | 12                                 | 66  | 71  | 69 | 61 | 57 | 49                        | 47 | 45 | 27                                 | 52  | 55  | 52 | 47 | 41 | 41                        | 35 | 30 | 21 |
|          | ø315               | 9,0               | 2592  | 720  | 1525                 | 27                                 | 71  | 76  | 75 | 69 | 64 | 57                        | 51 | 49 | 34                                 | 57  | 60  | 58 | 55 | 48 | 49                        | 40 | 35 | 28 |
|          | 0,08m <sup>2</sup> | 12,0              | 3456  | 960  | 2033                 | 48                                 | 71  | 76  | 74 | 70 | 64 | 58                        | 50 | 48 | 34                                 | 57  | 60  | 57 | 56 | 48 | 50                        | 38 | 33 | 27 |
| 400x300  | 0,8                | 365               | 101   | 215  | 0                    | 61                                 | 64  | 65  | 48 | 44 | 34 | 47                        | 44 | 19 | 47                                 | 48  | 48  | 34 | 28 | 26 | 35                        | 32 | -  |    |
|          | 3,0                | 1296              | 360   | 762  | 3                    | 58                                 | 61  | 58  | 46 | 44 | 37 | 38                        | 35 | -  | 44                                 | 45  | 41  | 32 | 28 | 29 | 26                        | 20 | -  |    |
|          | equiv.             | 6,0               | 2592  | 720  | 1525                 | 12                                 | 68  | 72  | 71 | 63 | 58 | 51                        | 47 | 45 | 29                                 | 54  | 56  | 54 | 49 | 42 | 43                        | 35 | 30 | 23 |
|          | ø400               | 9,0               | 3888  | 1080 | 2287                 | 27                                 | 73  | 78  | 76 | 71 | 65 | 58                        | 51 | 49 | 36                                 | 59  | 62  | 59 | 57 | 49 | 50                        | 40 | 35 | 30 |
|          | 0,12m <sup>2</sup> | 12,0              | 5184  | 1440 | 3049                 | 48                                 | 73  | 78  | 76 | 71 | 66 | 60                        | 50 | 48 | 36                                 | 59  | 62  | 59 | 57 | 50 | 52                        | 38 | 33 | 29 |
| 400x400  | 0,8                | 464               | 129   | 273  | 0                    | 61                                 | 64  | 65  | 48 | 44 | 34 | 47                        | 44 | 20 | 47                                 | 48  | 48  | 34 | 28 | 26 | 35                        | 32 | -  |    |
|          | 3,0                | 1728              | 480   | 1016 | 3                    | 59                                 | 62  | 59  | 47 | 46 | 38 | 38                        | 35 | -  | 45                                 | 46  | 42  | 33 | 30 | 30 | 26                        | 20 | -  |    |
|          | equiv.             | 6,0               | 3456  | 960  | 2033                 | 12                                 | 69  | 74  | 72 | 64 | 60 | 52                        | 47 | 45 | 31                                 | 55  | 58  | 55 | 50 | 44 | 44                        | 35 | 30 | 25 |
|          | ø450               | 9,0               | 5184  | 1440 | 3049                 | 27                                 | 74  | 79  | 78 | 72 | 67 | 60                        | 51 | 49 | 37                                 | 60  | 63  | 61 | 58 | 51 | 52                        | 40 | 35 | 31 |
|          | 0,16m <sup>2</sup> | 12,0              | 6912  | 1920 | 4066                 | 48                                 | 74  | 79  | 77 | 73 | 67 | 61                        | 50 | 48 | 37                                 | 60  | 63  | 60 | 59 | 51 | 53                        | 38 | 33 | 30 |
| 500x400  | 0,8                | 580               | 161   | 341  | 0                    | 63                                 | 66  | 66  | 49 | 45 | 35 | 48                        | 45 | 22 | 49                                 | 50  | 49  | 35 | 29 | 27 | 36                        | 33 | -  |    |
|          | 3,0                | 2160              | 600   | 1271 | 3                    | 61                                 | 64  | 61  | 48 | 47 | 39 | 39                        | 37 | 20 | 47                                 | 48  | 44  | 34 | 31 | 31 | 26                        | 21 | -  |    |
|          | equiv.             | 6,0               | 4320  | 1200 | 2541                 | 12                                 | 71  | 75  | 73 | 65 | 61 | 53                        | 48 | 46 | 33                                 | 57  | 59  | 56 | 51 | 45 | 45                        | 36 | 31 | 26 |
|          | ø500               | 9,0               | 6480  | 1800 | 3812                 | 27                                 | 76  | 81  | 79 | 73 | 68 | 61                        | 52 | 50 | 40                                 | 62  | 65  | 62 | 59 | 52 | 53                        | 40 | 35 | 33 |
|          | 0,20m <sup>2</sup> | 12,0              | 8640  | 2400 | 5082                 | 48                                 | 76  | 81  | 79 | 74 | 68 | 62                        | 50 | 49 | 40                                 | 62  | 65  | 62 | 60 | 52 | 54                        | 39 | 34 | 32 |
| 600x400  | 0,8                | 696               | 193   | 410  | 0                    | 65                                 | 67  | 68  | 50 | 46 | 36 | 49                        | 46 | 24 | 51                                 | 51  | 51  | 36 | 30 | 28 | 36                        | 33 | 20 |    |
|          | 3,0                | 2592              | 720   | 1525 | 3                    | 63                                 | 66  | 62  | 49 | 47 | 40 | 40                        | 37 | 22 | 49                                 | 50  | 45  | 35 | 31 | 32 | 27                        | 22 | -  |    |
|          | equiv.             | 6,0               | 5184  | 1440 | 3049                 | 12                                 | 73  | 77  | 75 | 66 | 61 | 54                        | 49 | 47 | 35                                 | 59  | 61  | 58 | 52 | 45 | 46                        | 36 | 32 | 28 |
|          | ø560               | 9,0               | 7776  | 2160 | 4574                 | 27                                 | 77  | 83  | 80 | 74 | 68 | 61                        | 52 | 51 | 42                                 | 63  | 67  | 63 | 60 | 52 | 53                        | 41 | 36 | 34 |
|          | 0,24m <sup>2</sup> | 12,0              | 10368 | 2880 | 6099                 | 48                                 | 77  | 83  | 80 | 74 | 69 | 63                        | 51 | 50 | 42                                 | 63  | 67  | 63 | 60 | 53 | 55                        | 39 | 35 | 33 |
| 800x400  | 0,8                | 928               | 258   | 546  | 0                    | 67                                 | 70  | 70  | 51 | 47 | 37 | 50                        | 47 | 27 | 53                                 | 54  | 53  | 37 | 31 | 29 | 37                        | 34 | 22 |    |
|          | 3,0                | 3456              | 960   | 2033 | 3                    | 65                                 | 68  | 64  | 50 | 49 | 41 | 41                        | 39 | 25 | 51                                 | 52  | 47  | 36 | 33 | 33 | 28                        | 24 | -  |    |
|          | equiv.             | 6,0               | 6912  | 1920 | 4066                 | 12                                 | 75  | 80  | 77 | 67 | 63 | 55                        | 50 | 48 | 38                                 | 61  | 64  | 60 | 53 | 47 | 47                        | 37 | 33 | 30 |
|          | ø630               | 9,0               | 10368 | 2880 | 6099                 | 27                                 | 80  | 85  | 82 | 75 | 70 | 63                        | 53 | 52 | 45                                 | 66  | 69  | 65 | 61 | 54 | 55                        | 41 | 37 | 36 |
|          | 0,32m <sup>2</sup> | 12,0              | 13824 | 3840 | 8132                 | 48                                 | 80  | 85  | 82 | 76 | 70 | 64                        | 52 | 51 | 45                                 | 66  | 69  | 65 | 62 | 54 | 56                        | 40 | 36 | 36 |
| 1000x400 | 0,8                | 1160              | 322   | 683  | 0                    | 69                                 | 72  | 71  | 52 | 48 | 38 | 51                        | 48 | 29 | 55                                 | 56  | 54  | 38 | 32 | 30 | 38                        | 35 | 24 |    |
|          | 3,0                | 4320              | 1200  | 2541 | 3                    | 67                                 | 70  | 65  | 51 | 50 | 42 | 42                        | 40 | 27 | 53                                 | 54  | 48  | 37 | 34 | 34 | 29                        | 25 | 19 |    |
|          | equiv.             | 6,0               | 8640  | 2400 | 5082                 | 12                                 | 77  | 81  | 78 | 68 | 64 | 56                        | 50 | 49 | 40                                 | 63  | 65  | 61 | 54 | 48 | 48                        | 38 | 34 | 32 |
|          | ø710               | 9,0               | 12960 | 3600 | 7624                 | 27                                 | 82  | 87  | 84 | 76 | 71 | 64                        | 54 | 53 | 47                                 | 68  | 71  | 67 | 62 | 55 | 56                        | 42 | 38 | 39 |
|          | 0,40m <sup>2</sup> | 12,0              | 17280 | 4800 | 10165                | 48                                 | 82  | 87  | 83 | 77 | 71 | 65                        | 53 | 52 | 47                                 | 68  | 71  | 66 | 63 | 55 | 57                        | 41 | 37 | 39 |
| 1000x500 | 0,8                | 1492              | 414   | 878  | 0                    | 72                                 | 74  | 74  | 54 | 50 | 40 | 52                        | 49 | 32 | 58                                 | 58  | 57  | 40 | 34 | 32 | 39                        | 36 | 27 |    |
|          | 3,0                | 5400              | 1500  | 3176 | 3                    | 69                                 | 72  | 67  | 52 | 51 | 43 | 42                        | 41 | 29 | 55                                 | 56  | 50  | 38 | 35 | 35 | 29                        | 26 | 21 |    |
|          | equiv.             | 6,0               | 10800 | 3000 | 6353                 | 12                                 | 79  | 83  | 80 | 69 | 65 | 57                        | 51 | 50 | 43                                 | 65  | 67  | 63 | 55 | 49 | 49                        | 38 | 35 | 34 |
|          | ø800               | 9,0               | 16200 | 4500 | 9529                 | 27                                 | 84  | 89  | 86 | 77 | 72 | 64                        | 55 | 55 | 49                                 | 70  | 73  | 69 | 63 | 56 | 56                        | 43 | 39 | 41 |
|          | 0,50m <sup>2</sup> | 12,0              | 21600 | 6000 | 12706                | 48                                 | 84  | 89  | 85 | 78 | 72 | 66                        | 54 | 53 | 49                                 | 70  | 73  | 68 | 64 | 56 | 58                        | 41 | 38 | 41 |
| 800x800  | 0,8                | 1923              | 534   | 1131 | 0                    | 74                                 | 77  | 76  | 55 | 51 | 41 | 53                        | 51 | 35 | 60                                 | 61  | 59  | 41 | 35 | 33 | 40                        | 37 | 29 |    |
|          | 3,0                | 6912              | 1920  | 4066 | 3                    | 71                                 | 74  | 69  | 53 | 52 | 44 | 43                        | 42 | 32 | 57                                 | 58  | 52  | 39 | 36 | 36 | 30                        | 27 | 23 |    |
|          | equiv.             | 6,0               | 13824 | 3840 | 8132                 | 12                                 | 81  | 86  | 81 | 70 | 66 | 58                        | 52 | 52 | 45                                 | 67  | 70  | 64 | 56 | 50 | 50                        | 39 | 37 | 37 |
|          | ø900               | 9,0               | 20736 | 5760 | 12198                | 27                                 | 86  | 91  | 87 | 78 | 73 | 66                        | 56 | 56 | 52                                 | 72  | 75  | 70 | 64 | 57 | 58                        | 43 | 41 | 43 |
|          | 0,64m <sup>2</sup> | 12,0              | 27648 | 7680 | 16264                | 48                                 | 86  | 91  | 87 | 79 | 73 | 67                        | 54 | 55 | 52                                 | 72  | 75  | 70 | 65 | 57 | 59                        | 42 | 40 | 43 |



### Specify as:

#### Example:

Supply and install, VAV terminal, single wall construction, from 1.2mm thick galvanized sheet steel, with 30mm duct flanges. Casing leakage rate to class II, VDI 3803/ DIN 24 194. 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 FloX-act®.

For:

Air volume .... m<sup>3</sup>/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

### 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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