# MODEL **LVD**

## External Weather Louvers with Damper

## Performance Data

### EFFECTIVE AREA

| W (mm) \ H (mm) | 250 | 300 | 350 | 400 | 500 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Effective area (m²) | | | | | | | | | | | | | |
| 300 | 0,0420 | 0,0540 | 0,660 | 0,0780 | 0,1050 | 0,1290 | 0,1800 | 0,2310 | 0,2820 | 0,3300 | 0,3810 | 0,4320 | 0,4830 |
| 350 | 0,0490 | 0,0630 | 0,0770 | 0,0910 | 0,1225 | 0,1505 | 0,2100 | 0,2965 | 0,3290 | 0,3850 | 0,4445 | 0,5040 | 0,5635 |
| 400 | 0,0560 | 0,0720 | 0,0880 | 0,1040 | 0,1400 | 0,1720 | 0,2400 | 0,3080 | 0,3760 | 0,4400 | 0,5080 | 0,5760 | 0,6440 |
| 450 | 0,0630 | 0,0810 | 0,0990 | 0,1170 | 0,1575 | 0,1935 | 0,2700 | 0,3465 | 0,4230 | 0,4950 | 0,5715 | 0,6480 | 0,7245 |
| 500 | 0,0700 | 0,0900 | 0,1100 | 0,1300 | 0,1750 | 0,2150 | 0,3000 | 0,3850 | 0,4700 | 0,5500 | 0,6350 | 0,7200 | 0,8050 |
| 600 | 0,0840 | 0,1080 | 0,1320 | 0,1560 | 0,2100 | 0,2580 | 0,3600 | 0,4620 | 0,5640 | 0,6600 | 0,7620 | 0,8640 | 0,9660 |
| 700 | 0,0980 | 0,1260 | 0,1540 | 0,1820 | 0,2450 | 0,3010 | 0,4200 | 0,5390 | 0,6580 | 0,7700 | 0,8890 | 1,0080 | 1,1270 |
| 800 | 0,1120 | 0,1440 | 0,1760 | 0,2080 | 0,2800 | 0,3440 | 0,4800 | 0,6160 | 0,7520 | 0,8800 | 1,0160 | 1,1520 | 1,2880 |
| 900 | 0,1260 | 0,1620 | 0,1980 | 0,2340 | 0,3150 | 0,3870 | 0,5400 | 0,6930 | 0,8460 | 0,9900 | 1,1430 | 1,2960 | 1,4490 |
| 1000 | 0,1400 | 0,1800 | 0,2200 | 0,2600 | 0,3500 | 0,4300 | 0,6000 | 0,7700 | 0,9400 | 1,1000 | 1,2700 | 1,4400 | 1,6100 |
| 1200 | 0,1680 | 0,2160 | 0,2640 | 0,3120 | 0,4200 | 0,5160 | 0,7200 | 0,9240 | 1,1280 | 1,3200 | 1,5240 | 1,7280 | 1,9320 |
| 1400 | 0,1960 | 0,2520 | 0,3080 | 0,3640 | 0,4900 | 0,6020 | 0,8400 | 1,0780 | 1,3160 | 1,5400 | 1,7780 | 2,0160 | 2,2540 |
| 1600 | 0,2240 | 0,2880 | 0,3520 | 0,4160 | 0,5600 | 0,6880 | 0,9600 | 1,2320 | 1,5040 | 1,7600 | 2,0320 | 2,3040 | 2,5760 |
| 1800 | 0,2520 | 0,3240 | 0,3960 | 0,4680 | 0,6300 | 0,7740 | 1,0800 | 1,3860 | 1,6920 | 1,9800 | 2,2860 | 2,5920 | 2,8980 |
| 2000 | 0,2800 | 0,3600 | 0,4400 | 0,5200 | 0,7000 | 0,8600 | 1,2000 | 1,5400 | 1,8800 | 2,2000 | 2,5400 | 2,8800 | 3,2200 |
| 2200 | 0,3080 | 0,3960 | 0,4840 | 0,5720 | 0,7700 | 0,9460 | 1,3200 | 1,6940 | 2,0680 | 2,4200 | 2,7940 | 2,1680 | 3,5420 |

| Height | Width [mm] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 200 | | 400 | | 600 | | 800 | | 1000 | | 1200 | |
| mm | l/s | m³/h | l/s | m³/h | l/s | m³/h | l/s | m³/h | l/s | m³/h | l/s | m³/h |
| 165 | 40 | 144 | 80 | 288 | 120 | 432 | 160 | 576 | 200 | 720 | 240 | 864 |
| 330 | 125 | 450 | 245 | 882 | 370 | 1332 | 490 | 1764 | 615 | 2214 | 735 | 2646 |
| 495 | 205 | 738 | 410 | 1476 | 615 | 2214 | 820 | 2952 | 1025 | 3690 | 1230 | 4428 |
| 660 | 290 | 1044 | 575 | 2070 | 865 | 3114 | 1150 | 4140 | 1440 | 5184 | 1725 | 6210 |
| 825 | 370 | 1332 | 740 | 2664 | 1110 | 3996 | 1480 | 5328 | 1850 | 6660 | 2220 | 7992 |
| 990 | 455 | 1638 | 905 | 3258 | 1360 | 4896 | 1810 | 6516 | 2265 | 8154 | 2715 | 9774 |
| 1155 | 535 | 1926 | 1070 | 3852 | 1605 | 5778 | 2140 | 7704 | 2675 | 9630 | 3210 | 11556 |
| 1320 | 620 | 2232 | 1235 | 4446 | 1855 | 6678 | 2470 | 8892 | 3090 | 11124 | 3705 | 13338 |
| 1485 | 700 | 2520 | 1400 | 5040 | 2100 | 7560 | 2800 | 10080 | 3500 | 12600 | 4200 | 15120 |
| 1650 | 785 | 2826 | 1565 | 5634 | 2350 | 8460 | 3130 | 11268 | 3915 | 14094 | 4695 | 16902 |
| 1815 | 865 | 3114 | 1730 | 6228 | 2595 | 9342 | 3460 | 12456 | 4325 | 15570 | 5190 | 18684 |
| 1980 | 950 | 3420 | 1895 | 6822 | 2845 | 10242 | 3790 | 13644 | 4740 | 17064 | 5690 | 20484 |
| 2145 | 1030 | 3708 | 2060 | 7416 | 3090 | 11124 | 4120 | 14832 | 5150 | 18540 | 6180 | 22248 |
| 2310 | 1115 | 4014 | 2225 | 8010 | 3340 | 12024 | 4450 | 16020 | 5560 | 20016 | 6680 | 24048 |
| 2740 | 1235 | 4446 | 2470 | 8892 | 3705 | 13338 | 4940 | 17784 | 6180 | 22248 | 7410 | 26676 |
| 3070 | 1400 | 5040 | 2800 | 10080 | 4200 | 15120 | 5600 | 20160 | 7000 | 25200 | 8400 | 30240 |
| 3400 | 1565 | 5634 | 3130 | 11268 | 4695 | 16902 | 6260 | 22536 | 7830 | 28188 | 9390 | 33804 |
| 3730 | 1730 | 6228 | 3460 | 12456 | 5190 | 18684 | 6920 | 24912 | 8650 | 31140 | 10380 | 37368 |
| 4060 | 1895 | 6822 | 3790 | 13644 | 5690 | 20484 | 7580 | 27288 | 9480 | 34128 | 11370 | 40932 |
| 4390 | 2060 | 7416 | 4120 | 14832 | 6180 | 22248 | 8240 | 29664 | 10300 | 37080 | 12360 | 44496 |
| 4720 | 2225 | 8010 | 4450 | 16020 | 6680 | 24048 | 8900 | 32040 | 11130 | 40068 | 13350 | 48060 |

| Height | Width [mm] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1400 | | 1600 | | 1800 | | 2000 | | 2200 | | 2400 | |
| mm | l/s | m³/h | l/s | m³/h | l/s | m³/h | l/s | m³/h | l/s | m³/h | l/s | m³/h |
| 165 | 280 | 1008 | 320 | 1152 | 360 | 1296 | 400 | 1440 | 440 | 1584 | 480 | 1728 |
| 330 | 860 | 3096 | 980 | 3528 | 1105 | 3978 | 1225 | 4410 | 1350 | 4860 | 1470 | 5292 |
| 495 | 1435 | 5166 | 1640 | 5904 | 1845 | 6642 | 2050 | 7380 | 2255 | 8118 | 2460 | 8856 |
| 660 | 2015 | 7254 | 2300 | 8280 | 2590 | 9324 | 2875 | 10350 | 3165 | 11394 | 3450 | 12420 |
| 825 | 2590 | 9324 | 2960 | 10656 | 3330 | 11988 | 3700 | 13320 | 4070 | 14652 | 4440 | 15984 |
| 990 | 3170 | 11412 | 3620 | 13032 | 4075 | 14670 | 4525 | 16290 | 4980 | 17928 | 5430 | 19548 |
| 1155 | 3745 | 13482 | 4280 | 15408 | 4815 | 17334 | 5350 | 19260 | 5890 | 21204 | 6420 | 23112 |
| 1320 | 4325 | 15570 | 4940 | 17784 | 5560 | 20016 | 6180 | 22248 | 6790 | 24444 | 7410 | 26676 |
| 1485 | 4900 | 17640 | 5600 | 20160 | 6300 | 22680 | 7000 | 25200 | 7700 | 27720 | 8400 | 30240 |
| 1650 | 5480 | 19728 | 6260 | 22536 | 7040 | 25344 | 7830 | 28188 | 8610 | 30996 | 9390 | 33804 |
| 1815 | 6060 | 21816 | 6920 | 24912 | 7790 | 28044 | 8650 | 31140 | 9520 | 34272 | 10380 | 37368 |
| 1980 | 6630 | 23868 | 7580 | 27288 | 8530 | 30708 | 9480 | 34128 | 10420 | 37512 | 11370 | 40932 |
| 2145 | 7210 | 25956 | 8240 | 29664 | 9270 | 33372 | 10300 | 37080 | 11330 | 40788 | 12360 | 44496 |
| 2310 | 7790 | 28044 | 8900 | 32040 | 10010 | 36036 | 11130 | 40068 | 12240 | 44064 | 13350 | 48060 |
| 2740 | 8650 | 31140 | 9880 | 35568 | 11120 | 40032 | 12350 | 44460 | 13590 | 48924 | 14820 | 53352 |
| 3070 | 9800 | 35280 | 11200 | 40320 | 12600 | 45360 | 14000 | 50400 | 15400 | 55440 | 16800 | 60480 |
| 3400 | 10960 | 39456 | 12520 | 45072 | 14090 | 50724 | 15650 | 56340 | 17220 | 61992 | 18780 | 67608 |
| 3730 | 12110 | 43596 | 13840 | 49824 | 15570 | 56052 | 17300 | 62280 | 19030 | 68508 | 20760 | 74736 |
| 4060 | 13270 | 47772 | 15160 | 54576 | 17060 | 61416 | 18950 | 68220 | 20850 | 75060 | 22740 | 81864 |
| 4390 | 14420 | 51912 | 16480 | 59328 | 18540 | 66744 | 20600 | 74160 | 22660 | 81576 | 24720 | 88992 |
| 4720 | 15580 | 56088 | 17800 | 64080 | 20030 | 72108 | 22250 | 80100 | 24480 | 88128 | 26700 | 96120 |

| v | Installation type | | | |
|---|---|---|---|---|
| | C | | D | |
| | $\Delta p_t$ | $L_{WA}$ | $\Delta p_t$ | $L_{WA}$ |
| m/s | Pa | dB(A) | Pa | dB(A) |
| 1.5 | 10 | 32 | 14 | 34 |
| 2 | 20 | 41 | 25 | 43 |
| 2.5 | 30 | 48 | 35 | 50 |
| 3 | 45 | 54 | 55 | 56 |
| 4 | 75 | 63 | 95 | 66 |
| 5 | 115 | 70 | 145 | 73 |
| 6 | 170 | 76 | 210 | 79 |

### Sizing Example

**Given data**

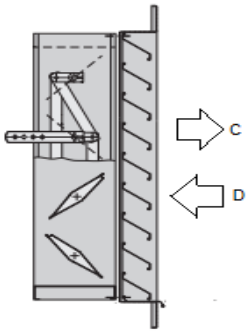
$\dot{V}$ =1400 l/s (5040 m³/h)
v = 2.5 m/s
Fresh air, installation type B
Maximum width: 800 mm

**Quick sizing**

WG/800 × 825 mm

**Calculation procedure**

A = 0.800 × (0.825 –0.085) = 0.592 m²
v = $\dot{V}$/A = 1400/0.592 (/1000) = 2.4 m/s
$\Delta p_{st}$ = 35 Pa
$L_{WA}$ = 50 dB(A)




| Submittal No. | Revision: | Date: 01/01/2019 | Submitted by: | Date submitted: |
|---|---|---|---|---|