



BDWN

Penthouse louvre Limited height Weatherproof vane

Available types

B D W N - O

- B** outside air
- D** penthouse louvre
- W** seawater-resistant aluminium
- N** starter frame for upstands

- Mesh

- G** galvanised mesh (standard)
- S** stainless steel insect mesh

- O** not applicable

Available upstands

- BDONAD:** uninsulated, seawater-resistant aluminium
- BDONAR:** insulated, seawater-resistant aluminium

Available uninsulated grommets

- BDOKAD:** seawater-resistant aluminium, length = 500 mm

SA-Select

Check SA-Select to create extended order codes and selection details online. **NB!** At this moment, SA-Select is only available in Dutch. But it is possible to create extended order codes and selection details online.

Use

The BDWN penthouse louvre is suitable for air supply or discharge, has an extremely limited height and an attractive design. The penthouse louvre is available to extremely large dimensions in order to combine the air supply or discharge for several ventilation systems. It is possible to have the penthouse louvre as a combined supply and discharge.

Characteristics

Standard fitted with hoisting rings.

Version

Penthouse louvre

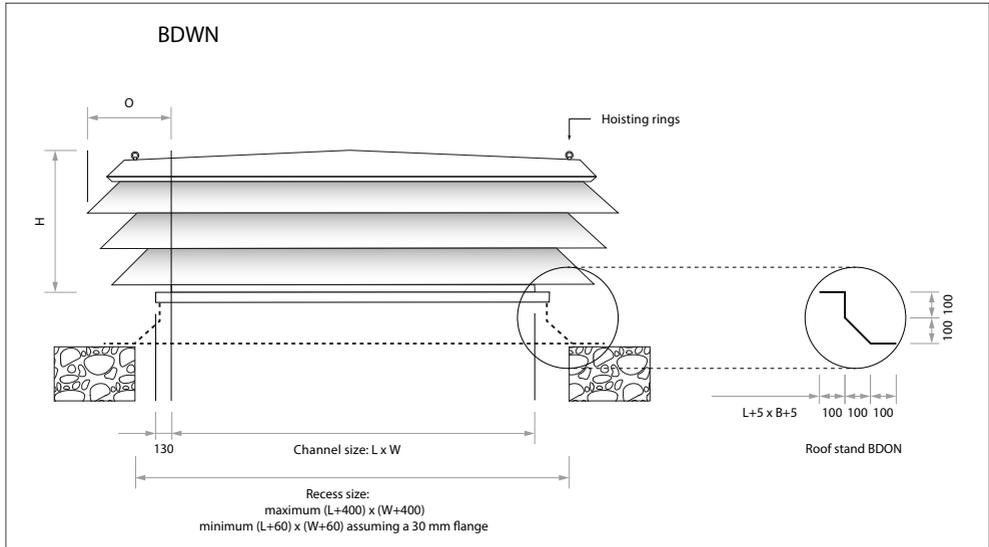
- Material: seawater-resistant aluminium
- Mesh: 19 x 19 mm, galvanised

Optional

- Insect mesh*: stainless steel, 2 x 2 mm

*The use of insect mesh reduces the net free flow and this has consequences for the design details. They are available in SA-Select.

Dimensions



Available dimensions, sizes and weight

W		L									
		600	800	1000	1200	1400	1600	1800	2000	2200	2400
600	H	395	540	540	540	540	540	540	540	540	685
	O	275	320	320	320	320	320	320	320	320	370
	kg	12	19	22	25	28	30	33	36	38	51
800	H		540	540	540	685	685	685	685	685	685
	O		320	320	320	370	370	370	370	370	370
	kg		22	25	28	39	42	46	49	53	56
1000	H			540	685	685	685	685	830	830	830
	O			320	370	370	370	370	415	415	415
	kg			28	39	43	47	50	64	69	73
1200	H				685	685	830	830	830	830	830
	O				370	370	415	415	415	415	415
	kg				43	47	61	65	70	74	78
1400	H					830	830	830	830	830	975
	O					415	415	415	415	415	465
	kg					61	65	70	75	80	97
1600	H						830	830	975	975	975
	O						415	415	465	465	465
	kg						70	75	92	98	103
1800	H							975	975	975	975
	O							465	465	465	465
	kg							93	98	104	110

Note

- The listed dimensions are in mm.

Selection details

BDWNG

Table 1.1: Supply (with L x W = 1200 x 1200 mm)

	V	3	4	5	6	7	m/s
BDWNGO	Δp_s	19	33	52	75	101	Pa
	L_{pA}	32	41	48	53	58	dB(A)

Table 1.2: Discharge (with L x W = 1200 x 1200 mm)

	V	3	4	5	6	7	m/s
BDWNGO	Δp_s	9	15	24	35	47	Pa
	L_{pA}	33	42	49	54	59	dB(A)

Table 2: Required passage surface

air volume		m/s					
m ³ /s	m ³ /h	2	3	4	5	6	7
		m ²					
0.60	2160	0.30	0.20	0.15	0.12	0.10	0.09
0.80	2880	0.40	0.27	0.20	0.16	0.13	0.11
1.00	3600	0.50	0.33	0.25	0.20	0.17	0.14
1.50	5400	0.75	0.50	0.38	0.30	0.25	0.21
2.00	7200	1.00	0.67	0.50	0.40	0.33	0.29
2.50	9000	1.25	0.83	0.63	0.50	0.42	0.36
3.00	10800	1.50	1.00	0.75	0.60	0.50	0.43
4.00	14400	2.00	1.33	1.00	0.80	0.67	0.57
5.00	18000	2.50	1.67	1.25	1.00	0.83	0.71
6.00	21600	3.00	2.00	1.50	1.20	1.00	0.86
8.00	28800	4.00	2.67	2.00	1.60	1.33	1.14
10.00	36000		3.33	2.50	2.00	1.67	1.43
15.00	54000			3.75	3.00	2.50	2.14
20.00	72000				4.00	3.33	2.86
25.00	90000					4.17	3.57
30.00	108000						4.29

Preferred range

Table 3: Passage and penthouse louvre height

W		L									
		600	800	1000	1200	1400	1600	1800	2000	2200	2400
600	H	395	540	540	540	540	540	540	540	685	685
	m ²	0.36	0.48	0.60	0.72	0.84	0.96	1.08	1.20	1.32	1.44
800	H		540	540	540	685	685	685	685	685	685
	m ²		0.64	0.80	0.96	1.12	1.28	1.44	1.60	1.76	2.00
1000	H			540	685	685	685	685	830	830	830
	m ²			1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40
1200	H				685	685	830	830	830	830	830
	m ²				1.44	1.68	1.92	2.16	2.40	2.64	2.88
1400	H					830	830	830	830	975	975
	m ²					1.96	2.24	2.52	2.80	3.08	3.36
1600	H						830	830	975	975	975
	m ²						2.56	2.88	3.20	3.52	3.84
1800	H							975	975	975	1120
	m ²							3.24	3.60	3.96	4.32

Note

- The listed dimensions are in mm.

Table 4: Sound correction for different dimensions

W	L									
	600	800	1000	1200	1400	1600	1800	2000	2200	2400
	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
600	-6	-5	-4	-3	-2	-2	-1	-1	0	0
800	-5	-4	-3	-2	-1	-1	0	0	1	1
1000	-4	-3	-2	-1	0	0	1	1	2	2
1200	-3	-2	-1	0	1	1	2	2	3	3
1400	-2	-1	0	1	1	2	2	3	3	4
1600	-2	-1	0	1	2	2	3	3	4	4
1800	-1	0	1	2	2	3	4	4	4	5

Note

- The maximum inflow speed is limited at 4 m/s in connection with the weatherproof limit.
- However, blow-through means the weatherproofness of penthouse louvres is not solely dependent on the inflow speed. It is recommended to fit a drainage option in the connecting duct.
- The given height is the optimum height. Lowering the penthouse louver produces too much reduction in the passage. Increasing it produces an inefficient cost increase.
- $LpA = LwA - 10 \text{ dB}$.
- The sound pressure LpA is given for a penthouse louver dimension of $L \times W \times H = 1200 \times 1200 \times 685 \text{ mm}$. For correction with a different dimension, please refer to the sound correction table 4.
- The listed dimensions are in mm.

Selection example

- Determine the speed by using table 1 and the pressure loss and sound production that is deemed permissible.
- In combination with the air volume, table 2 is used to determine the required passage.
- Table 3 then provides the possible penthouse louver dimensions.
- If the penthouse louver has a dimension other than $L \times W = 1200 \times 1200 \text{ mm}$, correct the sound production in accordance with table 4.

Fitting

