

New!



BDHN

Penthouse louvre
Compact construction height
Horizontal supply/discharge
Rain-capture element

Available types

BDHN--

- B** outside air
- D** aluminium penthouse louvre
- H** horizontal supply/discharge
- N** starter frame for upstand

- Mesh

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

- Fitting

- B** fixing lugs
- O** not applicable

Available upstands

BDOEAD: uninsulated, seawater-resistant aluminium

BDOEAR: insulated, seawater-resistant aluminium

Available uninsulated grommets

BDOKAD: seawater-resistant aluminium, length 500 mm

Use

The BDHN penthouse louvre design is suitable for air supply and discharge. The penthouse louvre has a compact construction height, which can be useful for sight lines when the footprint is the same. Rainwater on the penthouse louvre is discharged internally to the corners, which means water is not drawn in over the diffusers during air supply.

Characteristics

Standard fitted with hoisting rings.

Version

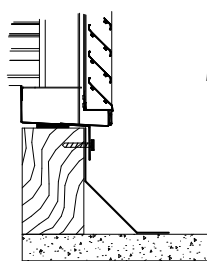
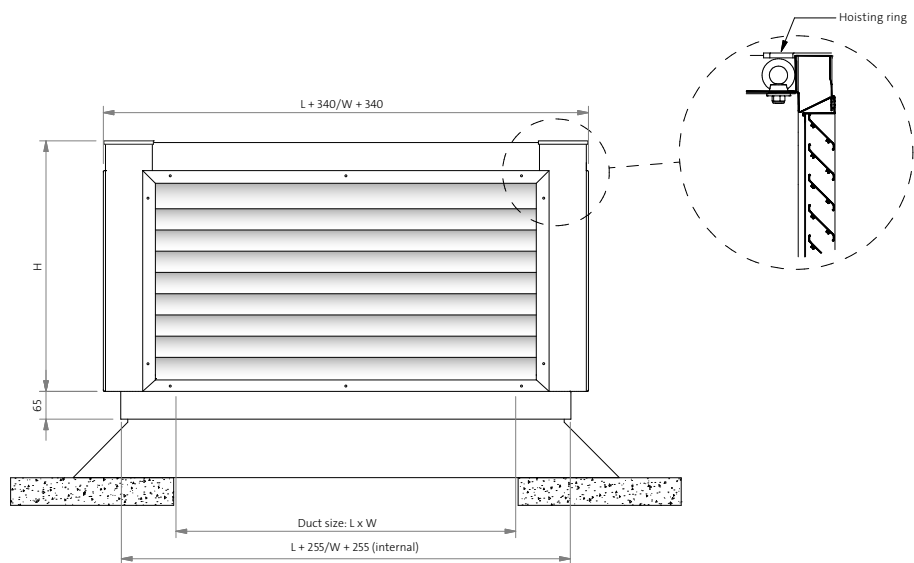
Frame/diffusers:	extruded and seawater-resistant aluminium
Mesh:	19 x 19 galvanised
Post-treatment:	powder-coated polyester mat RAL 7015 slate grey fine texture

Optional

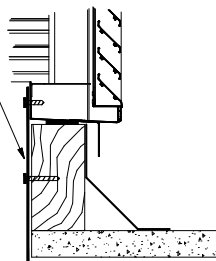
Insect mesh*: stainless steel, 2 x 2 mm

*The use of insect mesh reduces the net free flow and this has consequences for the design details.

Dimensions

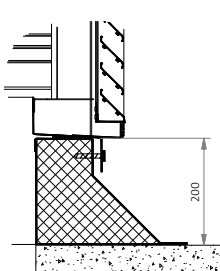


Mounting strip
(optional)

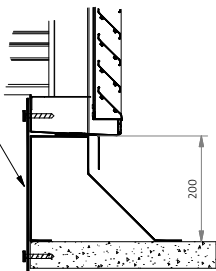


Attachment on the outside of the penthouse louvre.
(structural upstand)

Attachment to the interior of the penthouse louvre.
(structural upstand)

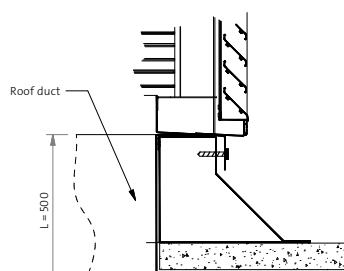


Mounting strip
(optional)



Attachment on the outside of the penthouse louvre.
(aluminium upstand; shown BDOEAR)

Attachment on the inside of the penthouse louvre.
(aluminium upstand; shown BDOEAD)



Aluminum roof duct BDOKAD
(optional)

Available dimensions and weights

W		L									
		600	800	1000	1200	1400	1600	1800	2000	2200	2400
600	H	490	540	540	590	590	640	640	640	690	690
	kg	25	35	40	50	55	60	65	70	75	90
800	H		590	640	690	690	740	740	790	790	790
	kg		45	50	60	65	80	85	90	95	105
1000	H			690	740	790	790	840	890	890	940
	kg			60	75	80	90	100	105	110	130
1200	H				790	840	890	940	940	990	990
	kg				85	90	105	115	130	140	145
1400	H					890	940	990	1040	1090	1090
	kg					105	125	130	150	155	175
1600	H						990	1040	1090	1140	1190
	kg						130	150	165	175	185
1800	H							1090	1140	1190	1240
	kg							165	175	195	215

Note

- The dimensions are in mm.

Available dimensions

- Interim sizes available in increments of 50 mm.

Selection details

BDHN

Table 1.1 Supply (with L x W = 1600 x 1600 mm)

		2	3	4	5	6	7	m/s
BDHN	Δp_s	7	17	27	44	69	86	Pa
aluminium	L_{PA}	24	36	42	48	55	58	dB(A)

Table 1.2 Discharge (with L x W = 1600 x 1600 mm)

		2	3	4	5	6	7	m/s
BDHN	Δp_s	6	14	23	37	58	72	Pa
aluminium	L_{PA}	21	33	39	45	52	55	dB(A)

Table 2 Required passage surface

lucht-hoeveelheid		m/s					
m^3/s	m^3/h	2	3	4	5	6	7
		m^2	m^2	m^2	m^2	m^2	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	490	540	540	590	590	640	640	640	690	690
	m ²	0.36	0.48	0.60	0.72	0.84	0.96	1.08	1.20	1.32	1.44
800	H		590	640	690	690	740	740	790	790	790
	m ²		0.64	0.80	0.96	1.12	1.28	1.44	1.60	1.76	2.00
1000	H			690	740	790	790	840	890	890	940
	m ²			1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40
1200	H				790	840	890	940	940	990	990
	m ²				1.44	1.68	1.92	2.16	2.40	2.64	2.88
1400	H					890	940	990	1040	1090	1090
	m ²					1.96	2.24	2.52	2.80	3.08	3.36
1600	H						990	1040	1090	1140	1190
	m ²						2.56	2.88	3.20	3.52	3.84
1800	H							1090	1140	1190	1240
	m ²							3.24	3.60	3.96	4.32

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	-9	-7	-6	-6	-5	-4	-4	-3	-3	-2
800		-6	-5	-4	-4	-3	-2	-2	-2	-1
1000			-4	-3	-3	-2	-2	-1	-1	0
1200				-2	-2	-1	-1	0	0	1
1400					-1	-1	0	0	1	1
1600						0	1	1	1	2
1800							1	1	2	2

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 dimensions are in mm.

Selection example

- Determine the speed by using table 1.1 or 1.2 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 louvre dimensions.
- $L_{pA} = L_{WA} - 10$ dB.
- The sound pressure L_{pA} is given for a penthouse louvre dimension of $L \times W \times H = 1600 \times 1600 \times 1200$ mm. For correction with a different dimension, please refer to the sound correction table 4.