

External weather louvres

Type WG

2



For the most diverse applications, available also in large sizes

External weather louvres as a protection of air conditioning systems against the direct ingress of rain, leaves and birds into fresh air and exhaust air openings

- Maximum width of 2400 mm, maximum height of 2310 mm, maximum area of 4 m² (aluminium variant also for continuous horizontal runs)
- Low differential pressure due to aerofoil blades
- Low air-regenerated noise
- All aerodynamic data is measured in aerodynamics and acoustics laboratories
- Available in standard sizes and many intermediate sizes
- Simple and quick installation due to perimeter border
- Variants made of galvanised sheet steel, aluminium or stainless steel
- Flexible arrangement of sections for covering large areas (should then be fixed on a support structure which is to be provided by others)

Optional equipment and accessories

- Installation subframe
- Can be combined with multileaf or non-return dampers
- Insect screen
- Powder-coated or anodised



Bottom blade



Regular blades

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Variants

Product examples

External weather louvre, variant WG



External weather louvre made of galvanised steel sections

External weather louvre, variant WG-AL



External weather louvre made of aluminium sections

External weather louvre, variant WG-B-AL



External weather louvre, horizontal run, aluminium

Description

For detailed information on accessories see Chapter K3 – 2.2

Application

- External weather louvres of Type WG for the fresh air and exhaust air openings of air conditioning systems
- Protection against the direct ingress of rain as well as against leaves and birds
- Recommended face velocity for fresh air openings: 2 – 2.5 m/s max.

Variants

- WG: External weather louvre made of galvanised sheet steel
- WG-A2: External weather louvre made of stainless steel
- WG-AL: External weather louvre made of aluminium
- WG-B-AL: External weather louvre made of aluminium, for continuous horizontal runs

Nominal sizes

- B: 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400 mm (intermediate sizes 201 – 2399 mm in increments of 1 mm)
- Width subdivided max. = 4900 mm (intermediate sizes 2401 – 4899 mm in increments of 1 mm)
- H: 165, 330, 495, 660, 825, 990, 1155, 1320, 1485, 1650, 1815, 1980, 2145, 2310 mm (intermediate sizes 166 – 2309 mm in increments of 1 mm)
- Hight subdivided max. = 4720 mm (intermediate sizes 2311 – 4719 mm in increments of 1 mm)
- Any combination of B × H
- Undivided construction up to 4 m²

WG-B-AL

- WG-B-AL-M (middle section) B: 2000 mm
- WG-B-AL-E (end section) B: 1000 – 2000 mm (intermediate sizes 1001 – 1999 mm in increments of 1 mm)
- H: 165 – 1980 mm (intermediate sizes 166 – 1979 mm in increments of 1 mm)

Accessories

- Installation subframe: Installation subframe for the fast and simple installation of external weather louvres

Special features

- Large areas can be provided by arranging multiple single sections horizontally and/or vertically (subdivided construction); single sections made of aluminium can also be combined into continuous horizontal runs
- Low differential pressure and low air-regenerated noise due to aerofoil blades
- Simple and quick installation due to perimeter border
- Free area of approx. 60 % (with insect screen approx. 45 %)
- Silicone free

Maintenance

- Maintenance-free as construction and materials are not subject to wear

Technical data

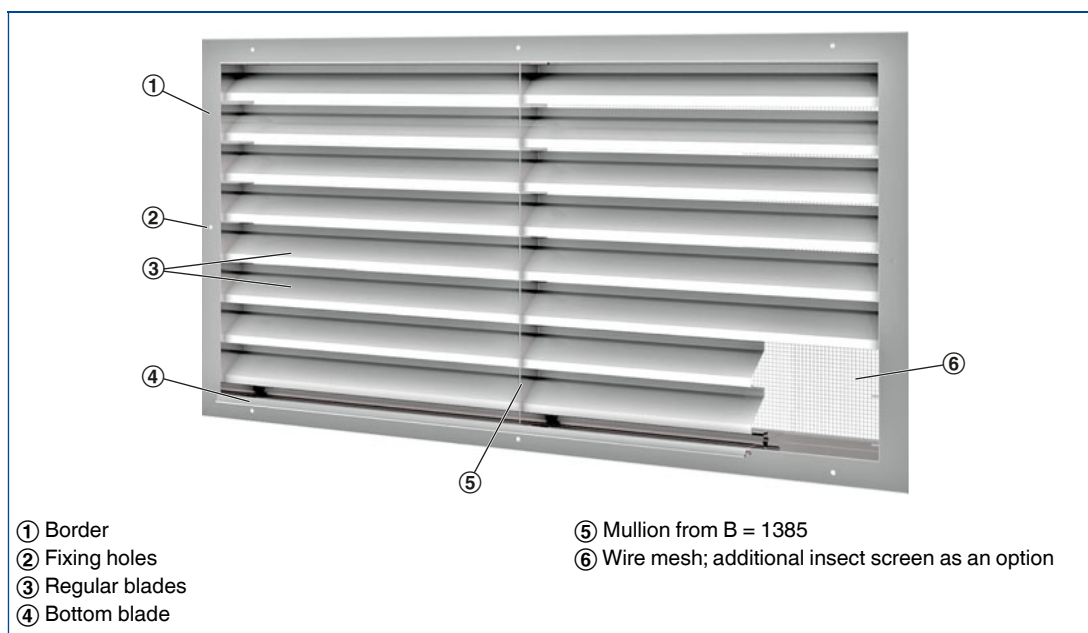
Nominal sizes	200 × 165 – 2400 × 1650 / 1600 × 2310 mm
Width subdivided	Up to 4900 mm
Height subdivided	Up to 4720 mm
Horizontal runs (WG-B-AL)	H: 165 – 1980 mm
Volume flow rate range (undivided construction)	40 – 13350 l/s at 2.5 m/s
Volume flow rate range (undivided construction)	144 – 48660 m ³ /h at 2.5 m/s
Free area	Approx. 60 % (with insect screen approx. 45 %)
Total differential pressure – exhaust air	30 Pa at 2.5 m/s
Total differential pressure – fresh air	35 Pa at 2.5 m/s

Function

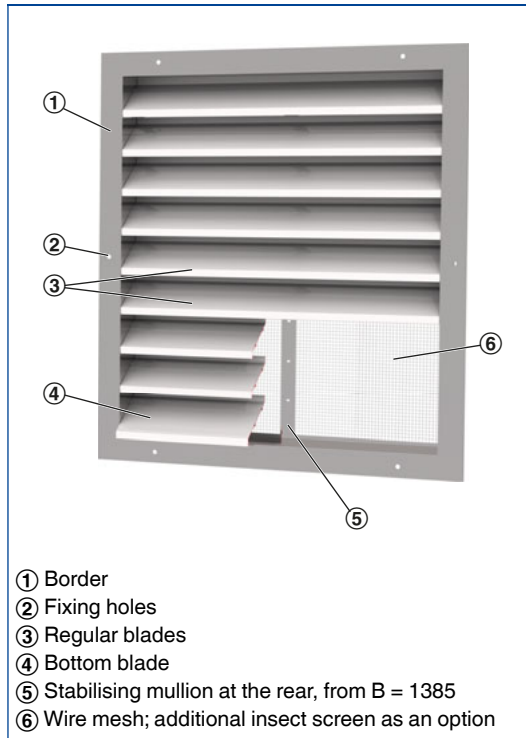
Functional description

External weather louvres are externally mounted air transfer devices for the fresh air and exhaust air of air conditioning systems. They are installed in external walls and façades. Their narrowly arranged blades give good protection against the direct ingress of rain as well as against leaves and birds. Under certain unfavourable conditions, such as heavy rain, and depending on the airflow velocity it might happen that slight quantities of water enter together with the air. This is why the airflow velocity in fresh air openings should not exceed 2 – 2.5 m/s.

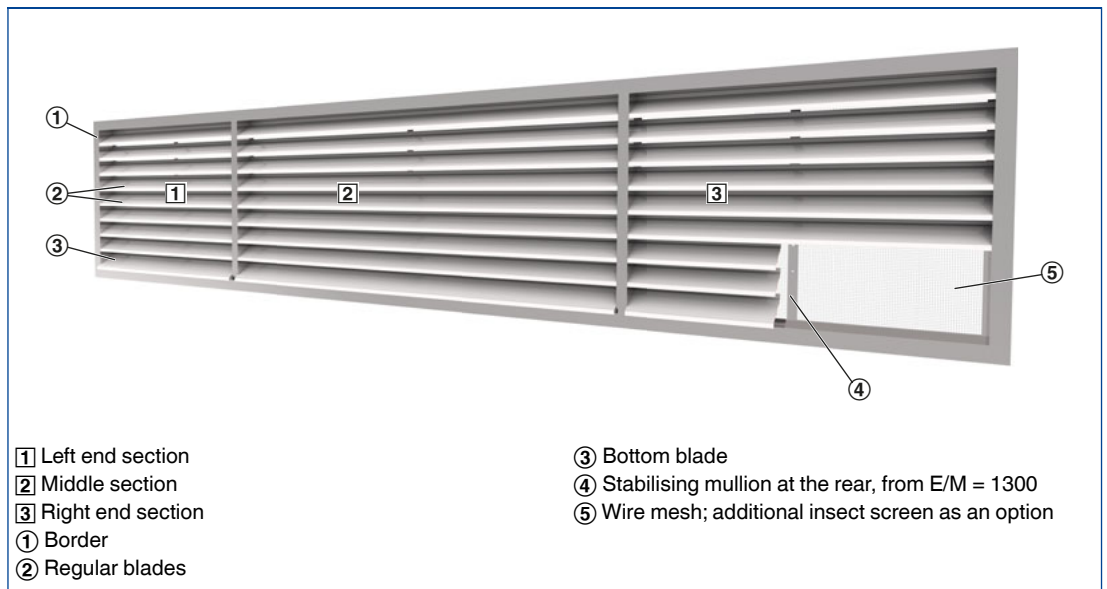
Schematic illustration of WG, WG-A2



Schematic illustration of WG-AL



Schematic illustration of WG-B-AL



Order code

WG

WG – AL – 2 – U / 600×1155 / ER / P1 – RAL ...



1 Type

WG External weather louvres

2 Material

No entry: galvanised sheet steel

A2 Stainless steel

AL Aluminium

3 Construction

No entry: wire mesh, galvanised steel

1 Insect screen, galvanised steel (only WG, WG-AL)

2 Wire mesh, stainless steel (only WG-AL)

3 Wire mesh and insect screen, stainless steel (only WG-AL, WG-A2)

U Border without fixing holes
1, 2, 3 can be combined with U

4 Nominal size [mm]

B × H
(B × H > 4 m² when subdivided)

5 Installation subframe

No entry: none

ER With (not for construction U)

6 Surface

No entry: standard construction

P1 Powder-coated, RAL CLASSIC colour

PS Powder-coated, DB colour

Only for WG-AL

S2 Anodised to EURAS standard, E6-C-31...35

S3 Anodised to EURAS standard, E6-C-0

Gloss level:

RAL 9010 50 %

RAL 9006 30 %

All other RAL colours 70 %

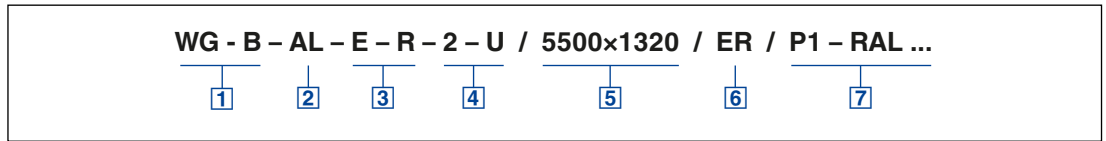
Order example

WG-AL-1-U/1200×1150/S2-E6-C-31

Material	Aluminium
Construction	Insect screen, galvanised steel, border without fixing holes
Nominal size	1200×1150 mm
Installation subframe	Without
Surface	Anodised to EURAS standard, E6-C-31, pale bronze

Order code

WG-B-AL



1 Type

WG-B External weather louvre,
for continuous horizontal runs of any width

2 Material

AL Aluminium

3 Section

No entry: complete horizontal run,
nominal size

E-R Right end section

E-L Left end section

M Middle section

4 Construction

No entry: wire mesh, galvanised steel

1 Insect screen, galvanised steel

2 Wire mesh, stainless steel

3 Wire mesh and insect screen,
stainless steel

U Border without fixing holes

1, 2, 3 can be combined with U

5 Nominal size [mm]

B × H

For complete horizontal run:

B ≤ 4 m: 2 end sections (E)

B > 4 m: 2 end sections (E)

and n intermediate sections (M)

6 Installation subframe

No entry: none

ER With (not for construction U)

7 Surface

No entry: raw aluminium

P1 Powder-coated,
RAL CLASSIC colour

PS Powder-coated, NCS or DB colour

S2 Anodised to EURAS standard,
E6-C-31...35

S3 Anodised to EURAS standard, E6-C-0

Gloss level:

RAL 9010 50 %

RAL 9006 30 %

All other RAL colours 70 %

Order example

WG-B-AL/4500×1980/ER

Material	Aluminium
Section	1 right end section of 1250 mm, 1 middle section of 2000 mm, 1 left end section of 1250 mm
Construction	Wire mesh
Nominal size	4500×1980 mm
Installation subframe	With
Surface	Standard construction

Quick sizing tables provide a good overview of the volume flow rates with an airflow velocity of 2.5 m/s. Values for intermediate widths can be interpolated. Precise intermediate values and volume flow rates for other airflow velocities can be calculated with our Easy Product Finder design programme.

Quick sizing – volume flow rate at 2.5 m/s

Height	Width [mm]							
	200		400		600		800	
mm	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h
165	40	144	80	288	120	432	160	576
330	125	450	245	882	370	1332	490	1764
495	205	738	410	1476	615	2214	820	2952
660	290	1044	575	2070	865	3114	1150	4140
825	370	1332	740	2664	1110	3996	1480	5328
990	455	1638	905	3258	1360	4896	1810	6516
1155	535	1926	1070	3852	1605	5778	2140	7704
1320	620	2232	1235	4446	1855	6678	2470	8892
1485	700	2520	1400	5040	2100	7560	2800	10080
1650	785	2826	1565	5634	2350	8460	3130	11268
1815	865	3114	1730	6228	2595	9342	3460	12456
1980	950	3420	1895	6822	2845	10242	3790	13644
2145	1030	3708	2060	7416	3090	11124	4120	14832
2310	1115	4014	2225	8010	3340	12024	4450	16020
2740	1235	4446	2470	8892	3705	13338	4940	17784
3070	1400	5040	2800	10080	4200	15120	5600	20160
3400	1565	5634	3130	11268	4695	16902	6260	22536
3730	1730	6228	3460	12456	5190	18684	6920	24912
4060	1895	6822	3790	13644	5690	20484	7580	27288
4390	2060	7416	4120	14832	6180	22248	8240	29664
4720	2225	8010	4450	16020	6680	24048	8900	32040

Quick sizing – volume flow rate at 2.5 m/s

Height	Width [mm]							
	1400		1600		1800		2000	
mm	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h
165	280	1008	320	1152	360	1296	400	1440
330	860	3096	980	3528	1105	3978	1225	4410
495	1435	5166	1640	5904	1845	6642	2050	7380
660	2015	7254	2300	8280	2590	9324	2875	10350
825	2590	9324	2960	10656	3330	11988	3700	13320
990	3170	11412	3620	13032	4075	14670	4525	16290
1155	3745	13482	4280	15408	4815	17334	5350	19260
1320	4325	15570	4940	17784	5560	20016	6180	22248
1485	4900	17640	5600	20160	6300	22680	7000	25200
1650	5480	19728	6260	22536	7040	25344	7830	28188
1815	6060	21816	6920	24912	7790	28044	8650	31140
1980	6630	23868	7580	27288	8530	30708	9480	34128
2145	7210	25956	8240	29664	9270	33372	10300	37080
2310	7790	28044	8900	32040	10010	36036	11130	40068
2740	8650	31140	9880	35568	11120	40032	12350	44460
3070	9800	35280	11200	40320	12600	45360	14000	50400
3400	10960	39456	12520	45072	14090	50724	15650	56340
3730	12110	43596	13840	49824	15570	56052	17300	62280
4060	13270	47772	15160	54576	17060	61416	18950	68220
4390	14420	51912	16480	59328	18540	66744	20600	74160
4720	15580	56088	17800	64080	20030	72108	22250	80100

Quick sizing – volume flow rate at 2.5 m/s

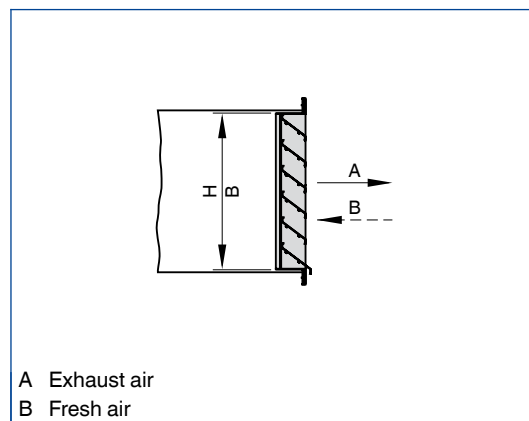
Height	Width [mm]											
	2900		3300		3700		4100		4500		4900	
mm	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h
165	560	2016	640	2304	720	2592	800	2880	880	3168	960	3456
330	1715	6174	1960	7056	2205	7938	2450	8820	2695	9702	2940	10584
495	2870	10332	3280	11808	3690	13284	4100	14760	4510	16236	4920	17712
660	4025	14490	4600	16560	5180	18648	5750	20700	6330	22788	6900	24840
825	5180	18648	5920	21312	6660	23976	7400	26640	8140	29304	8800	31968
990	6340	22824	7240	26064	8150	29340	9050	32580	9960	35856	10860	39096
1155	7490	26964	8560	30816	9630	34668	10700	38520	11770	42372	12840	46224
1320	8650	31140	9880	35568	11120	40032	12350	44460	13590	48924	14820	53352
1485	9800	35280	11200	40320	12600	45360	14000	50400	15400	55440	16800	60480
1650	10960	39456	12520	45072	14090	50724	15650	56340	17220	61992	18780	67608
1815	12110	43596	13840	49824	15570	56052	17300	62280	19030	68508	20750	74736
1980	13270	47772	15160	54576	17060	61416	18950	68220	20850	75060	22750	81864
2145	14420	51912	16480	59328	18540	66744	20600	74160	22660	81576	24700	88992
2310	15580	56088	17800	64080	20030	72108	22250	80100	24480	88128	26700	96120
2740	17290	62244	19760	71136	22230	80028	24700	88920	27170	97812	29650	106704
3070	19600	70560	22400	80640	25200	90720	28000	100800	30800	110880	33600	120960
3400	21910	78876	25040	90144	28170	101412	31300	112680	34430	123948	37550	135216
3730	24220	87192	27680	99648	31140	112104	34600	124560	38060	137016	41500	149472
4060	26530	95508	30320	109152	34110	122796	37900	136440	41690	150084	45500	163728
4390	28840	103824	32960	118656	37080	133488	41200	148320	45320	163152	49450	177984
4720	31150	112140	35600	128160	40050	144180	44500	160200	48950	176220	53400	192240

The sound power levels L_{WA} apply to external weather louvres with a flow cross section of 1 m².

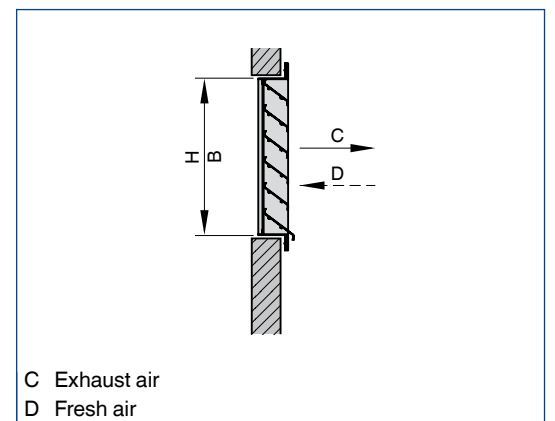
Quick sizing – differential pressure and sound power level

v	Installation type			
	A and C		B and D	
	Δp_t	L_{WA}	Δp_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

Duct installation (installation types A and B)



Plenum installation (installation types C and D)



Description



External weather louvre,
variant WG

Variant

- WG: External weather louvre made of galvanised sheet steel

Construction

- Galvanised sheet steel
- 1: With insect screen, galvanised steel
- U: Border without fixing holes 1 can be combined with U

Parts and characteristics

- Border
- Regular blades and bottom blade
- Wire mesh
- Optional insect screen
- Visible mullion from B = 1385 mm

Construction features

- Border, material thickness 1.5 mm
- Blades, material thickness 0.63 mm
- Free area of approx. 60 %, with insect screen approx. 45 %, based on $B \times (H - 0.085)$
- Wire mesh at the rear, mesh aperture $20 \times 20 \times 1.8$ mm
- Optional insect screen at the rear, mesh aperture $1.25 \times 1.25 \times 0.4$ mm
- Border fixing holes

Materials and surfaces

- Border, mullion and blades made of formed galvanised sheet steel
- Wire mesh made of galvanised steel
- P1: Powder-coated, RAL CLASSIC colour
- PS: Powder-coated, NCS or DB colour

Installation and commissioning

- Install with or without installation subframe (construction U only without installation subframe)
- Install subdivided constructions either horizontally next to each other or vertically on top of each other
- Install louvres for large areas on a support structure (to be provided by others)

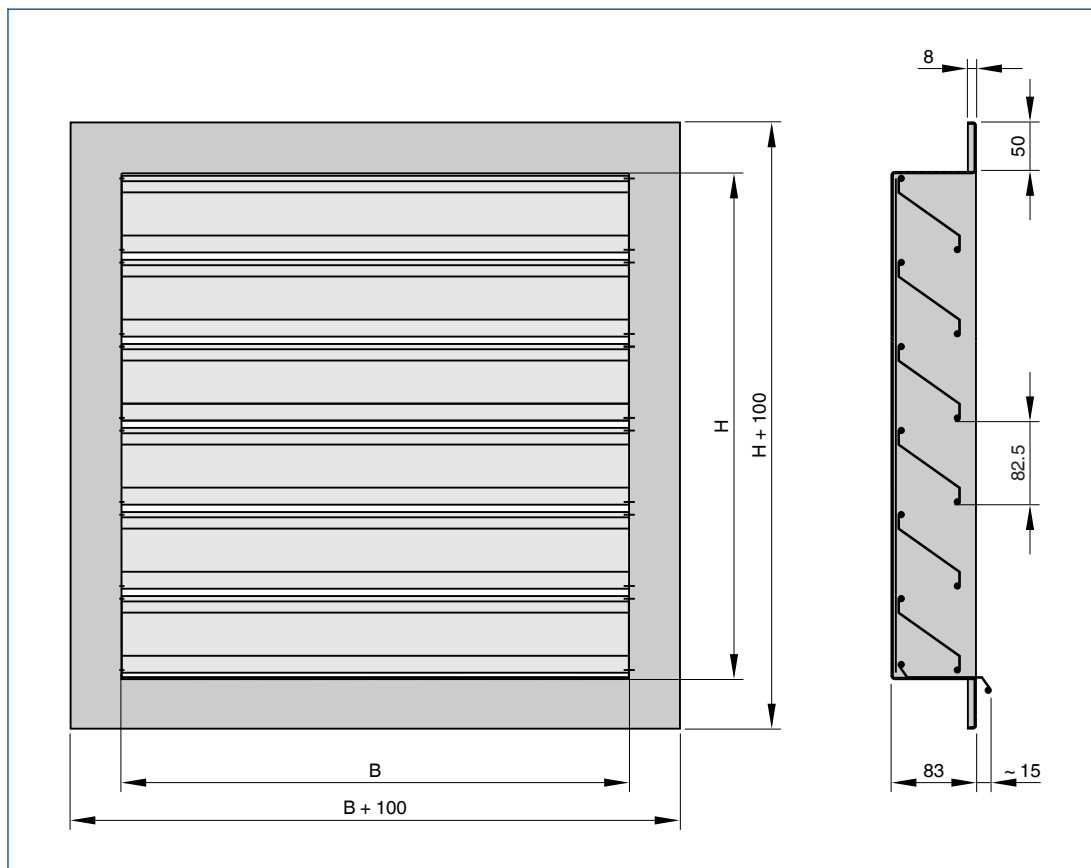
Dimensions Undivided construction

Flow cross section
to calculate the airflow
velocity:

$$A = B \times (H - 0.085)$$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2



Weight

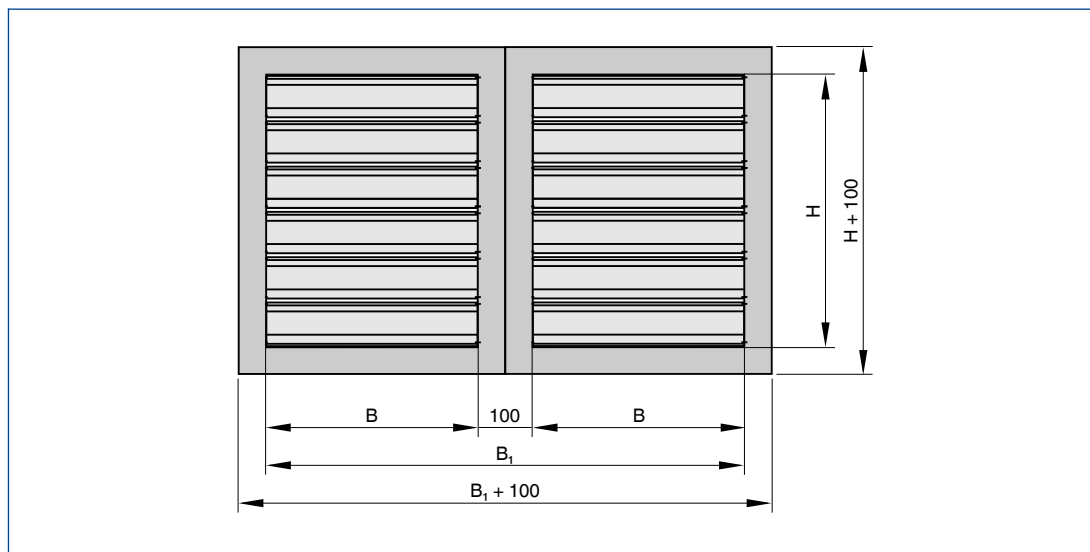
H	B [mm]											
	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400
mm	kg											
165	3	4	5	6	8	9	11	13	14	15	17	19
330	3	5	6	7	9	11	13	14	15	17	19	20
495	5	6	8	9	11	13	16	18	19	21	24	25
660	6	7	9	11	13	16	19	21	22	26	28	30
825	8	9	12	13	16	18	22	24	26	30	33	36
990	9	10	13	15	18	21	25	28	30	34	38	41
1155	11	12	15	17	20	24	28	31	33	39	43	46
1320	12	14	16	18	22	26	31	35	37	43	48	52
1485	14	16	18	20	24	29	34	38	41	47	52	57
1650	15	16	20	22	27	31	37	41	44	51	57	62
1815	17	18	21	24	29	34	40	45	48	56	62	
1980	18	19	22	26	31	37	43	48	52	60		
2145	20	21	23	28	33	39	46	52	56			
2310	21	23	25	30	35	42	49	55				

Width subdivided

Flow cross section
to calculate the airflow
velocity: $A = 2B \times (H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2, WG-AL, width subdivided



Weight

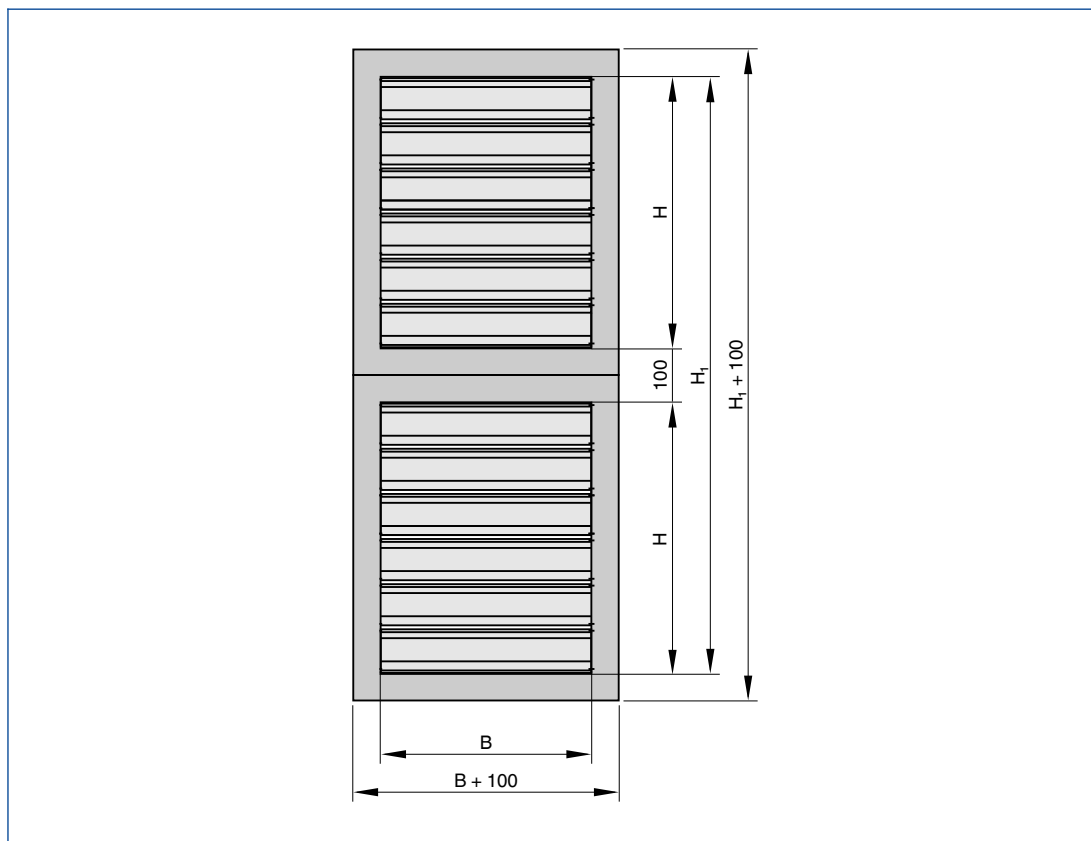
H	B ₁ [mm]									
	1900	2100	2300	2500	2900	3300	3700	4100	4500	4900
	B [mm]									
	900	1000	1100	1200	1400	1600	1800	2000	2200	2400
mm	kg									
165	14	15	17	18	22	25	27	30	34	37
330	16	18	20	21	26	28	30	34	38	40
495	20	22	24	26	32	35	37	43	47	50
660	24	27	29	31	38	42	44	51	57	61
825	28	31	34	37	44	49	52	60	66	71
990	32	36	39	42	50	56	59	68	76	82
1155	37	40	44	47	56	62	67	77	86	93
1320	41	44	48	52	62	69	74	86	95	103
1485	45	49	53	57	68	76	81	94	105	114
1650	49	53	58	63	74	83	89	103	114	124
1815	53	58	63	68	80	90	96	111	124	
1980	57	62	68	73	86	96	104	120		
2145	61	66	72	78	92	103	111			
2310	65	71	77	83	98	110				

Height subdivided

Flow cross section
to calculate the airflow
velocity: $A = B \times 2(H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2, WG-AL, height subdivided



Weight

H ₁	H	B [mm]					
		200	400	600	800	1000	1200
mm		kg					
2330	1155	21	24	30	33	40	47
2740	1320	24	28	33	37	44	52
3070	1485	27	31	37	41	49	57
3400	1650	30	32	40	44	53	63
3730	1815	33	36	42	48	58	68
4060	1980	36	38	44	52	62	73
4390	2145	39	42	46	56	66	78
4720	2310	42	46	50	60	71	83

Weight

H ₁	H	B [mm]					
		1400	1600	1800	2000	2200	2400
mm		kg					
2330	1155	56	62	67	77	86	93
2740	1320	62	69	74	86	95	103
3070	1485	68	76	81	94	105	114
3400	1650	74	83	89	103	114	124
3730	1815	80	90	96	111	124	
4060	1980	86	96	104	120		
4390	2145	92	103	111			
4720	2310	98	110				

Description



External weather louvre,
variant WG

Variant

- WG-A2: External weather louvre made of stainless steel

Construction

- Stainless steel
- 3: With insect screen, stainless steel
- U: Border without fixing holes 3 can be combined with U

Parts and characteristics

- Border
- Regular blades and bottom blade
- Wire mesh
- Optional insect screen
- Visible mullion from B = 1385 mm

Construction features

- Border, material thickness 1.5 mm
- Blades, material thickness 0.63 mm
- Free area of approx. 60 %, with insect screen approx. 45 %, based on $B \times (H - 0.085)$
- Wire mesh at the rear, mesh aperture $20 \times 20 \times 1.8$ mm
- Optional insect screen at the rear, mesh aperture $1.25 \times 1.25 \times 0.4$ mm
- Border fixing holes

Materials and surfaces

- Border, mullion, blades and wire mesh made of stainless steel, material no. 1.4301
- P1: Powder-coated, RAL CLASSIC colour
- PS: Powder-coated, NCS or DB colour

Installation and commissioning

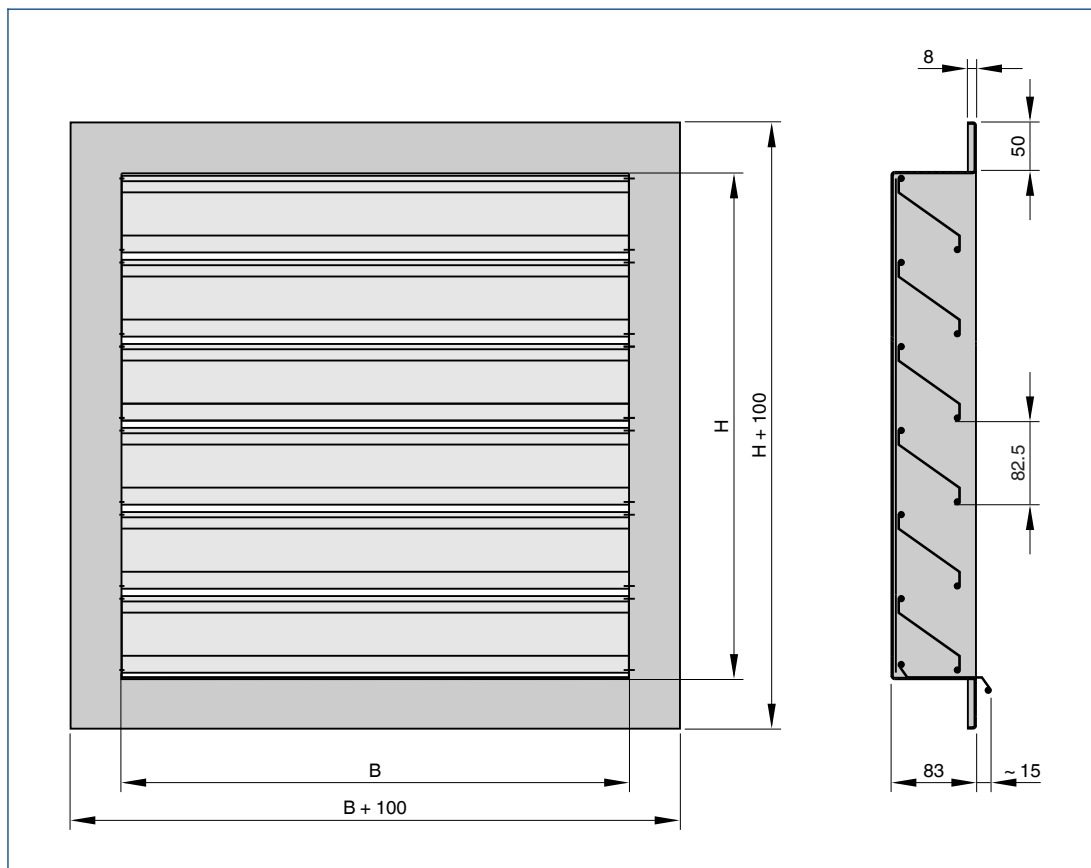
- Install with or without installation subframe (construction U only without installation subframe)
- Install subdivided constructions either horizontally next to each other or vertically on top of each other
- Install louvres for large areas on a support structure (to be provided by others)

Dimensions Undivided construction

Flow cross section
to calculate the airflow
velocity: $A = B \times (H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2



Weight

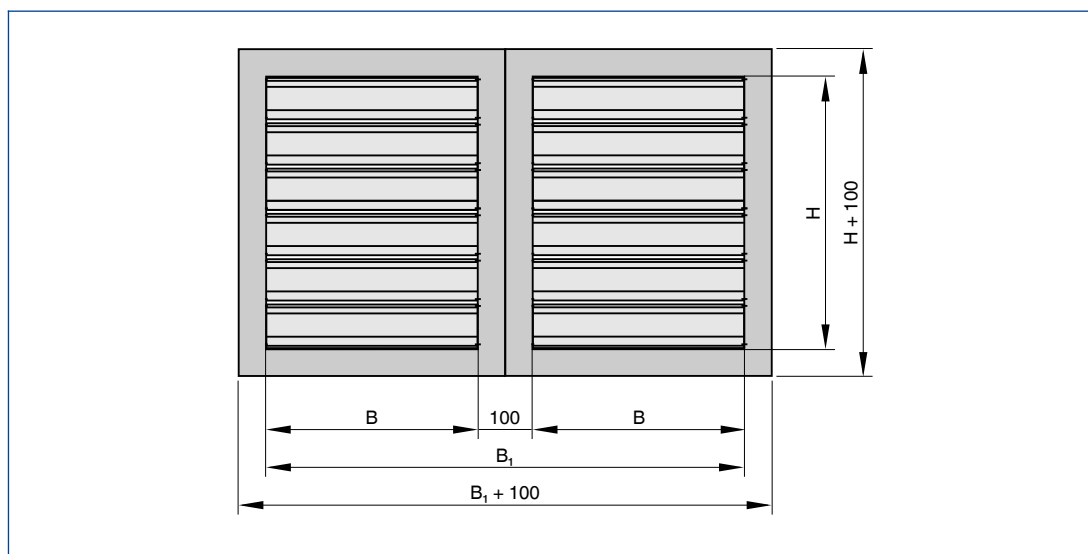
H	B [mm]											
	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400
mm	kg											
165	3	4	5	6	8	9	11	13	14	15	17	19
330	3	5	6	7	9	11	13	14	15	17	19	20
495	5	6	8	9	11	13	16	18	19	21	24	25
660	6	7	9	11	13	16	19	21	22	26	28	30
825	8	9	12	13	16	18	22	24	26	30	33	36
990	9	10	13	15	18	21	25	28	30	34	38	41
1155	11	12	15	17	20	24	28	31	33	39	43	46
1320	12	14	16	18	22	26	31	35	37	43	48	52
1485	14	16	18	20	24	29	34	38	41	47	52	57
1650	15	16	20	22	27	31	37	41	44	51	57	62
1815	17	18	21	24	29	34	40	45	48	56	62	
1980	18	19	22	26	31	37	43	48	52	60		
2145	20	21	23	28	33	39	46	52	56			
2310	21	23	25	30	35	42	49	55				

Width subdivided

Flow cross section
to calculate the airflow
velocity: $A = 2B \times (H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2, WG-AL, width subdivided



Weight

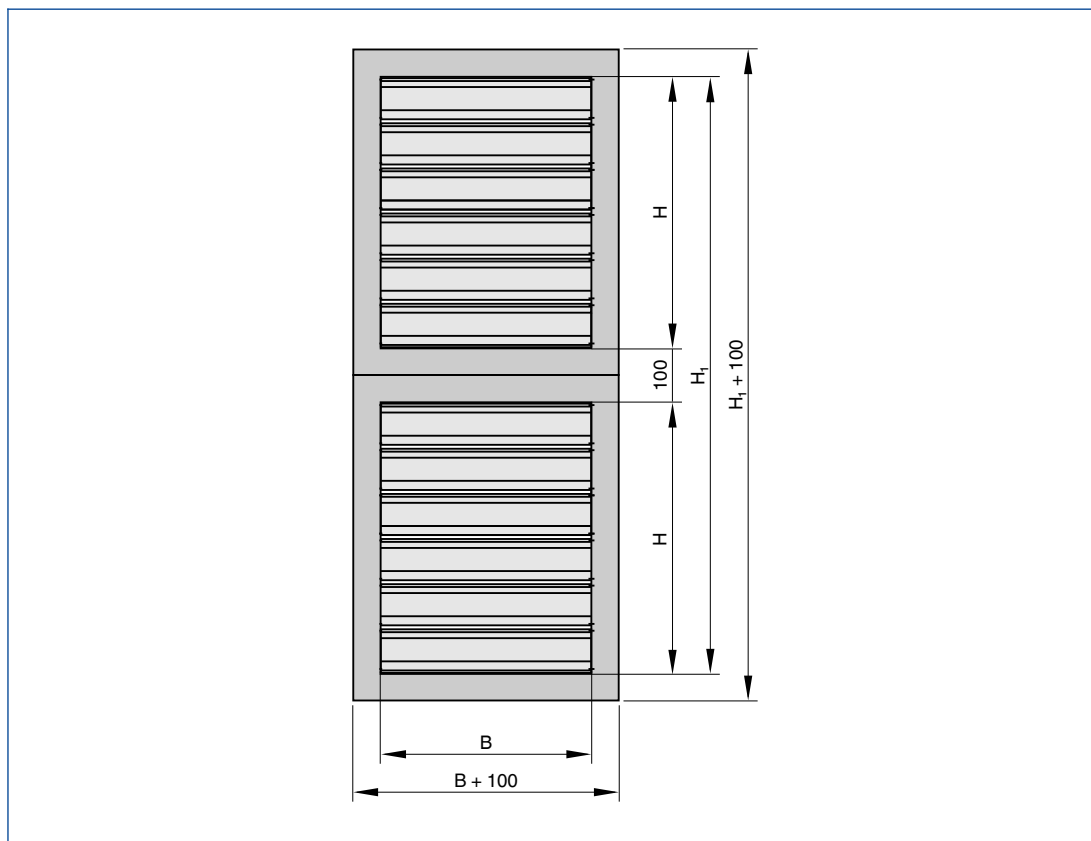
H	B ₁ [mm]									
	1900	2100	2300	2500	2900	3300	3700	4100	4500	4900
	B [mm]									
	900	1000	1100	1200	1400	1600	1800	2000	2200	2400
mm	kg									
165	14	15	17	18	22	25	27	30	34	37
330	16	18	20	21	26	28	30	34	38	40
495	20	22	24	26	32	35	37	43	47	50
660	24	27	29	31	38	42	44	51	57	61
825	28	31	34	37	44	49	52	60	66	71
990	32	36	39	42	50	56	59	68	76	82
1155	37	40	44	47	56	62	67	77	86	93
1320	41	44	48	52	62	69	74	86	95	103
1485	45	49	53	57	68	76	81	94	105	114
1650	49	53	58	63	74	83	89	103	114	124
1815	53	58	63	68	80	90	96	111	124	
1980	57	62	68	73	86	96	104	120		
2145	61	66	72	78	92	103	111			
2310	65	71	77	83	98	110				

Height subdivided

Flow cross section
to calculate the airflow
velocity: $A = B \times 2(H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2, WG-AL, height subdivided



Weight

H ₁	H	B [mm]					
		200	400	600	800	1000	1200
mm		kg					
2330	1155	21	24	30	33	40	47
2740	1320	24	28	33	37	44	52
3070	1485	27	31	37	41	49	57
3400	1650	30	32	40	44	53	63
3730	1815	33	36	42	48	58	68
4060	1980	36	38	44	52	62	73
4390	2145	39	42	46	56	66	78
4720	2310	42	46	50	60	71	83

Weight

H ₁	H	B [mm]					
		1400	1600	1800	2000	2200	2400
mm		kg					
2330	1155	56	62	67	77	86	93
2740	1320	62	69	74	86	95	103
3070	1485	68	76	81	94	105	114
3400	1650	74	83	89	103	114	124
3730	1815	80	90	96	111	124	
4060	1980	86	96	104	120		
4390	2145	92	103	111			
4720	2310	98	110				

Description



External weather louvre,
variant WG-AL

Variant

- WG-AL: External weather louvre made of aluminium

Construction

- Aluminium
- 1: With insect screen, galvanised steel
- 2: With wire mesh, stainless steel
- 3: With insect screen and wire mesh, stainless steel
- U: Border without fixing holes 1, 2, 3 can be combined with U

Parts and characteristics

- Border
- Regular blades and bottom blade
- Wire mesh
- Optional insect screen
- Stabilising mullion at the rear, from B = 1385 mm

Construction features

- Border, material thickness 1.7 mm
- Blades, material thickness 1.35 mm
- Free area of approx. 60 %, with insect screen approx. 45 %, based on $B \times (H - 0.085)$
- Wire mesh at the rear, mesh aperture $20 \times 20 \times 1.8$ mm
- Optional insect screen at the rear, mesh aperture $1.25 \times 1.25 \times 0.4$ mm
- Border fixing holes

Materials and surfaces

- Border, stabilising mullion and blades made of extruded aluminium sections, material nr. EN AW-6060 T66
- Wire mesh made of galvanised steel
- P1: Powder-coated, RAL CLASSIC colour
- PS: Powder-coated, NCS or DB colour
- S2: Anodised to EURAS standard, E6-C-31...35
- S3: Anodised to EURAS standard, E6-C-0

Installation and commissioning

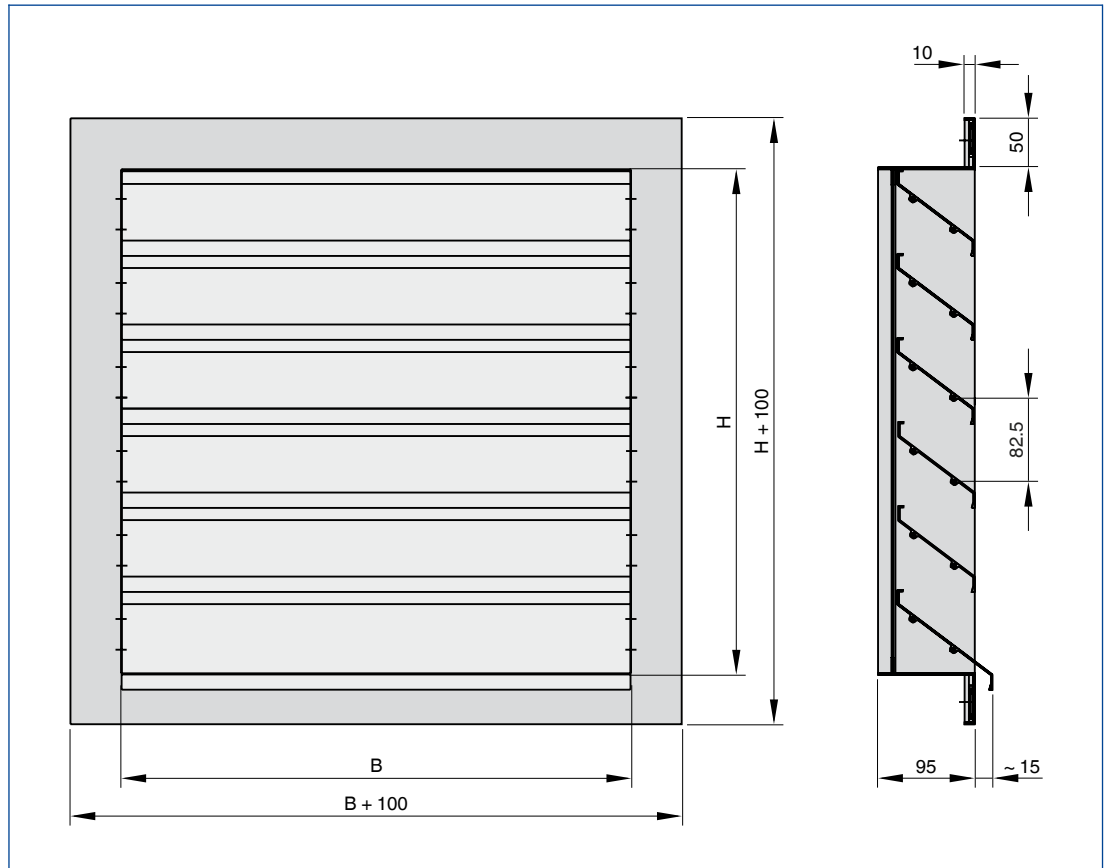
- Install with or without installation subframe (construction U only without installation subframe)
- Install subdivided constructions either horizontally next to each other or vertically on top of each other
- Install louvres for large areas on a support structure (to be provided by others)

Dimensions Undivided construction

Flow cross section
to calculate the airflow
velocity: $A = B \times (H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG-AL



Weight

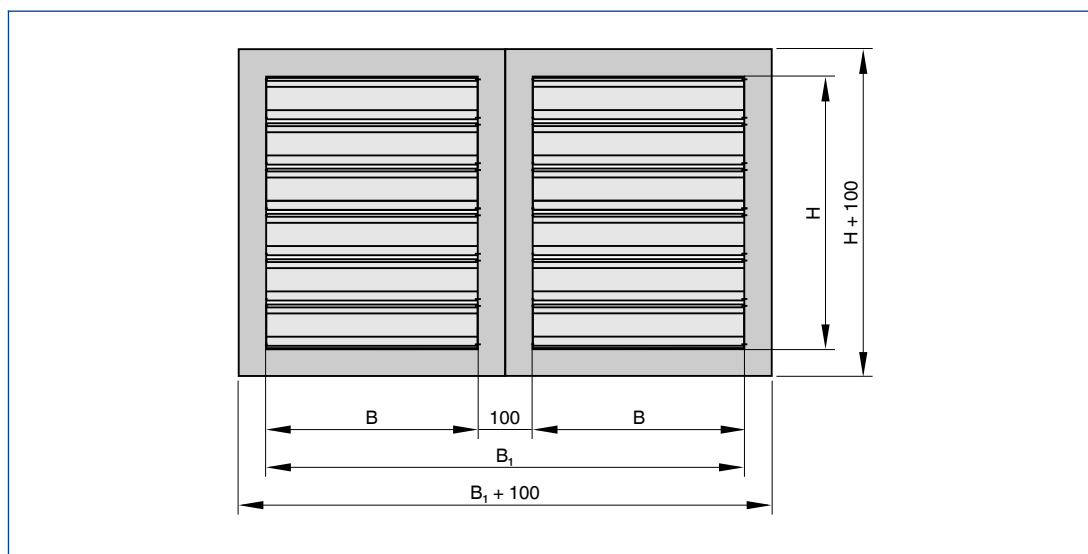
H	B [mm]											
	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400
mm	kg											
165	2	3	4	5	6	7	8	9	10	11	12	13
330	2	3	4	5	6	7	8	9	10	11	12	13
495	3	4	5	6	7	8	9	10	11	14	16	19
660	4	5	6	7	8	10	12	14	15	17	19	22
825	5	6	7	8	10	12	14	16	19	21	24	26
990	6	7	8	10	12	15	17	19	21	24	27	30
1155	7	8	10	12	14	16	18	21	24	27	30	33
1320	8	10	12	14	16	18	21	24	27	30	33	36
1485	10	12	14	16	18	21	24	27	30	33	36	39
1650	12	14	16	18	21	24	27	30	33	36	39	42
1815	14	16	18	21	24	27	30	33	36	39	42	
1980	16	18	20	24	27	30	33	36	39	42		
2145	18	20	22	27	30	33	36	39	42			
2310	20	22	24	29	33	36	39	42				

Width subdivided

Flow cross section
to calculate the airflow
velocity: $A = 2B \times (H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2, WG-AL, width subdivided



Weight

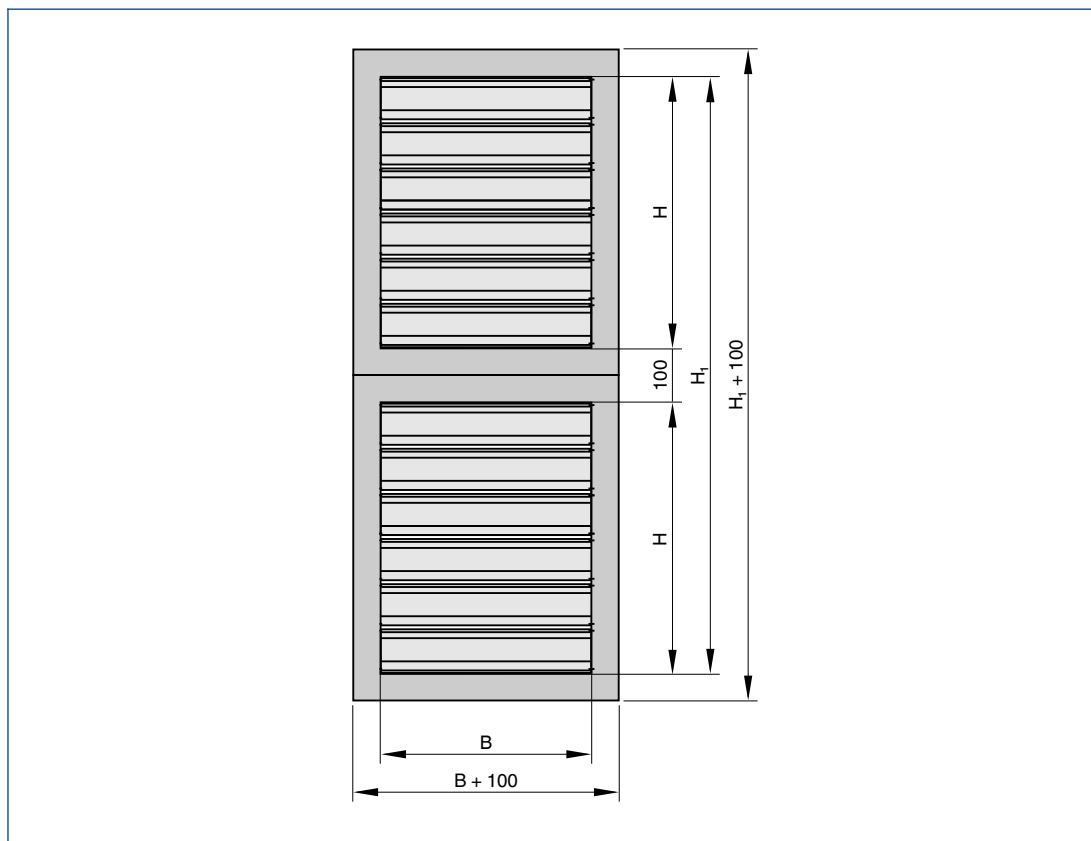
H	B ₁ [mm]									
	1900	2100	2300	2500	2900	3300	3700	4100	4500	4900
	B [mm]									
	900	1000	1100	1200	1400	1600	1800	2000	2200	2400
mm	kg									
165	10	11	12	13	15	17	19	21	23	25
330	11	12	13	14	16	18	20	22	24	26
495	13	14	15	16	18	20	22	28	32	38
660	15	16	18	20	24	28	30	34	38	44
825	18	20	22	24	28	32	38	42	48	52
990	22	24	27	30	34	38	42	48	54	60
1155	26	28	30	32	36	42	48	54	60	66
1320	30	32	34	36	42	48	54	60	66	72
1485	34	36	39	42	48	54	60	66	72	78
1650	39	42	45	48	54	60	66	72	78	84
1815	45	48	51	54	60	66	72	78	84	
1980	51	54	57	60	66	72	78	84		
2145	57	60	63	66	72	78	84			
2310	62	66	69	72	78	84				

Height subdivided

Flow cross section
to calculate the airflow
velocity: $A = B \times 2(H - 0.085)$

Unit of measure
for B and H: m

Dimensional drawing of WG, WG-A2, WG-AL, height subdivided



Weight

H ₁	H	B [mm]					
		200	400	600	800	1000	1200
mm		kg					
2330	1155	14	16	20	24	28	32
2740	1320	16	20	24	28	32	36
3070	1485	20	24	28	32	36	42
3400	1650	24	28	32	36	42	48
3730	1815	28	32	36	42	48	54
4060	1980	32	36	40	48	54	60
4390	2145	36	40	44	54	60	66
4720	2310	40	44	48	58	66	72

Weight

H ₁	H	B [mm]					
		1400	1600	1800	2000	2200	2400
mm		kg					
2330	1155	36	42	48	54	60	66
2740	1320	42	48	54	60	66	72
3070	1485	48	54	60	66	72	78
3400	1650	54	60	66	72	78	84
3730	1815	60	66	72	78	84	90
4060	1980	66	72	78	84	90	96
4390	2145	72	78	84	90	96	102
4720	2310	78	84	90	96	102	108

Description



External weather louvre,
variant WG-B-AL

Variant

- WG-B-AL: External weather louvre made of aluminium, for continuous horizontal runs

Construction

- Aluminium
- 1: With insect screen, galvanised steel
- 2: With wire mesh, stainless steel
- 3: With insect screen and wire mesh, stainless steel
- U: Border without fixing holes 1, 2, 3 can be combined with U

Parts and characteristics

- Border
- Regular blades and bottom blade
- Wire mesh
- Optional insect screen
- Stabilising mullion at the rear (for stability), from E/M = 1300 mm

Construction features

- Continuous horizontal runs include either two end sections (up to B = 4000 mm) or two end sections plus any number of middle sections (from B = 4001 mm)
- Border, material thickness 1.7 mm
- Blades, material thickness 1.35 mm
- Free area of approx. 60 %, with insect screen approx. 45 %, based on $B \times (H - 0.085)$
- Wire mesh at the rear, mesh aperture $20 \times 20 \times 1.8$ mm
- Optional insect screen at the rear, mesh aperture $1.25 \times 1.25 \times 0.4$ mm
- Border fixing holes

Materials and surfaces

- Border, stabilising mullion and blades made of extruded aluminium sections, material nr. EN AW-6060 T66
- Wire mesh made of galvanised steel
- P1: Powder-coated, RAL CLASSIC colour
- PS: Powder-coated, NCS or DB colour
- S2: Anodised to EURAS standard, E6-C-31...35
- S3: Anodised to EURAS standard, E6-C-0

Installation and commissioning

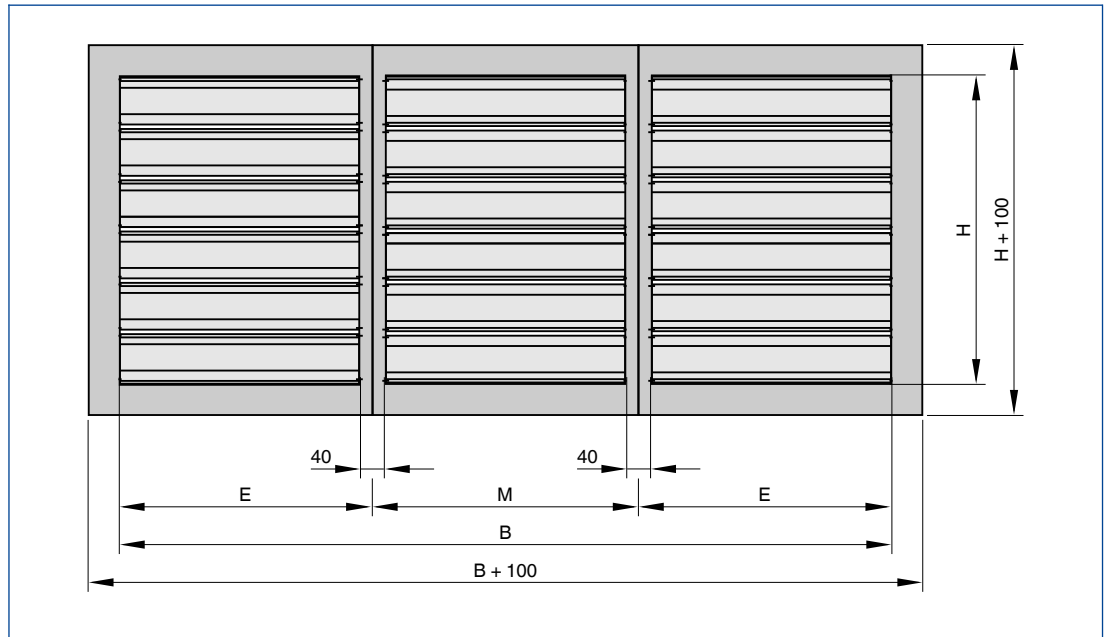
- Install with or without installation subframe (construction U only without installation subframe)
- Install end and middle sections individually, one after the other

Continuous horizontal runs

Flow cross section to calculate the airflow velocity:
 $A = ((E - 0.02) + n(M - 0.04) + (E - 0.02)) \times (H - 0.085)$
 $= B \times 2(H - 0.085)$

Unit of measure for B and H: m

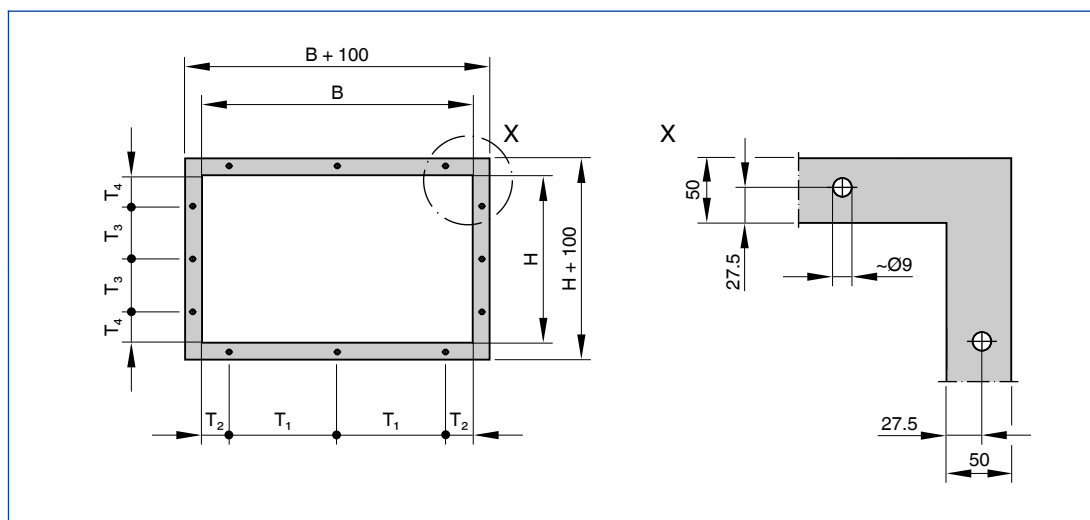
Dimensional drawing of WG-B-AL



Weight

H	M [mm]		E [mm]					
	2000	1000	1200	1400	1600	1800	2000	
mm	kg							
165	10	5	6	7	8	9	10	
330	11	6	7	8	9	10	11	
495	14	7	8	9	10	11	14	
660	17	8	10	12	14	15	17	
825	21	10	12	14	16	19	21	
990	24	12	15	17	19	21	24	
1155	27	14	16	18	21	24	27	
1320	30	16	18	21	24	27	30	
1485	33	18	21	24	27	30	33	
1650	36	21	24	27	30	33	36	
1815	39	24	27	30	33	36	39	
1980	42	27	30	33	36	39	42	

Border fixing holes – WG, WG-A2, WG-AL



Standard sizes

Dimensions

Width B mm	No. of holes n	T ₁ mm	T ₂ mm
200	1	–	100
400	2	240	80
600	2	440	80
800	2	640	80
1000	3	420	80
1200	3	520	80
1400	3	620	80
1600	4	480	80
1800	4	547	80
2000	4	613	80
2200	5	510	80
2400	5	560	80

Dimensions

Height H mm	No. of holes n	T ₃ mm	T ₄ mm
165	1	–	83
330	1	–	165
495	1	–	248
660	1	–	330
825	1	–	413
990	1	–	495
1155	1	–	578
1320	2	445	437
1485	2	500	492
1650	2	555	547
1815	2	610	602
1980	3	499	491
2145	3	540	533
2310	3	581	574

Intermediate sizes

Dimensions

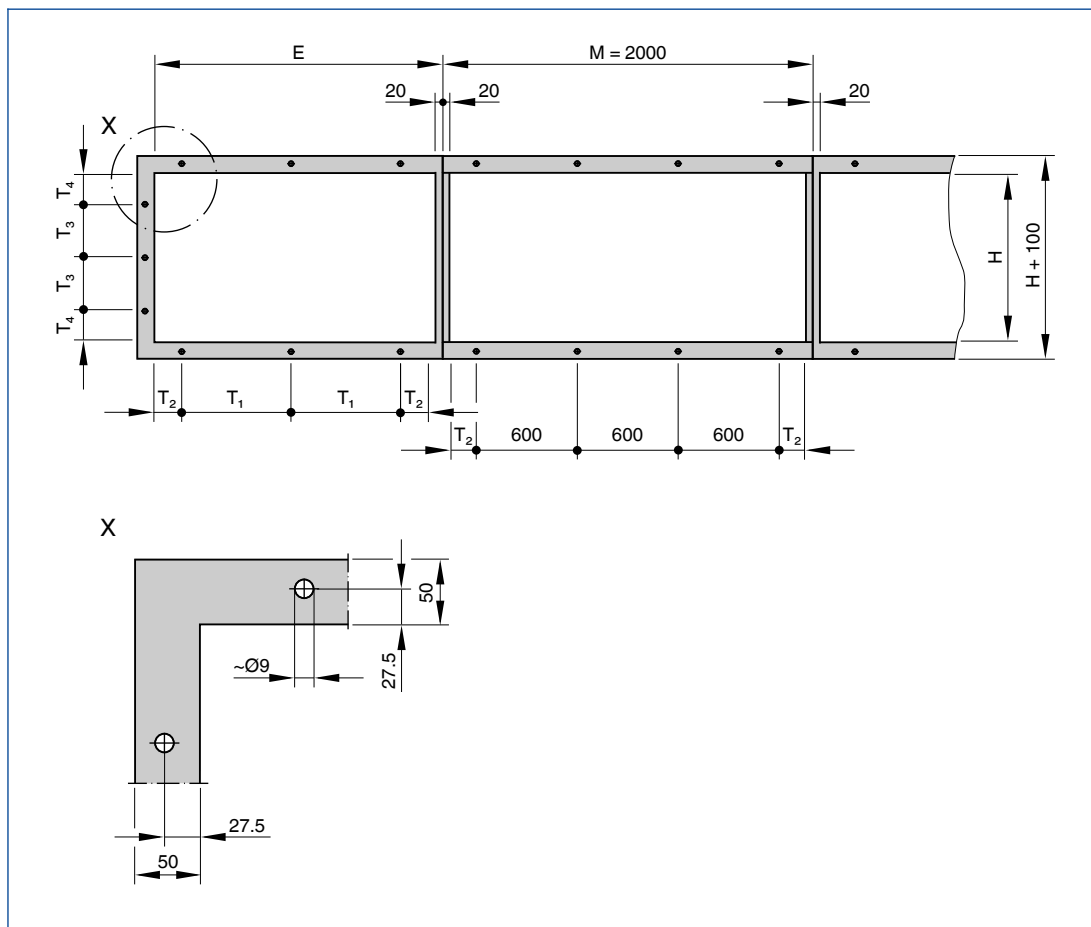
Width B mm	No. of holes n	T ₁ mm	T ₂ mm
165 – 384	1	–	B/2
385 – 881	2	B – 160	80
882 – 1481	3	(B – 160)/2	80
1482 – 2081	4	(B – 160)/3	80
2082 – 2399	5	(B – 160)/4	80

Dimensions

Height H mm	No. of holes n	T ₃ mm	T ₄ mm
166 – 1319	1	–	H/2
1321 – 1979	2	(H + 15)/3	T ₃ – 7.5
1981 – 2309	3	(H + 15)/4	T ₃ – 7.5

Continuous horizontal runs

Border fixing holes – WG-B-AL



2

Standard sizes

Dimensions

End section	No. of holes	T ₁	T ₂
E	n	mm	
mm		mm	
1000	3	410	80
1200	3	510	80
1400	4	407	80
1600	4	473	80
1800	4	540	80
2000	4	607	80

Dimensions

Height	No. of holes	T ₃	T ₄
H	n	mm	
mm		mm	
165	1	–	83
330	1	–	165
495	1	–	248
660	1	–	330
825	1	–	413
990	1	–	495
1155	1	–	578
1320	2	445	437
1485	2	500	492
1650	2	555	547
1815	2	610	602
1980	3	499	491

Intermediate sizes

Dimensions

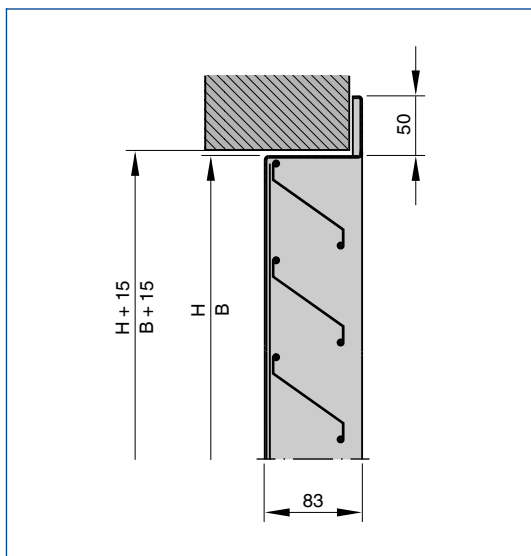
End section	No. of holes	T ₁	T ₂
E	n	mm	
mm		mm	
1001 – 1481	3	$(E - 180)/2$	80
1482 – 1999	4	$(E - 180)/3$	80

Dimensions

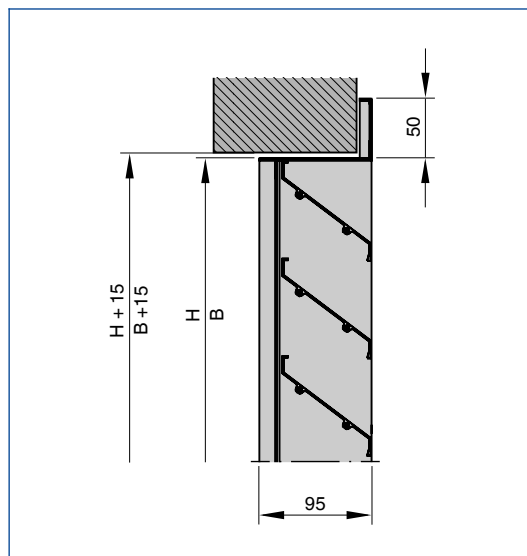
Height	No. of holes	T ₃	T ₄
H	n	mm	
mm		mm	
1001 – 1319	1	–	H/2
1321 – 1979	2	$(H + 15)/3$	T ₃ – 7.5

Installation dimensions

Wall installation without installation subframe WG, WG-A2



Wall installation without installation subframe WG-AL



Width or height subdivided

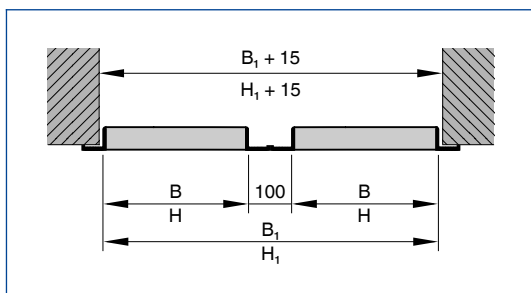
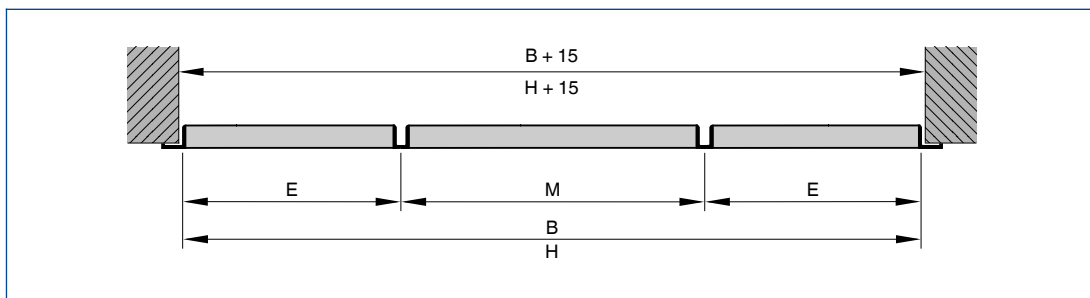


Illustration shows width subdivided

Horizontal runs of WG-B-AL



Standard text

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design programme.

Rectangular external weather louvre as a protection of air conditioning systems against the direct ingress of rain, leaves and birds into fresh air and exhaust air openings. Weather and noise protection with a compact-depth unit. Ready-to-install component which consists of a border, aerofoil rain defence blades, and a bird mesh at the rear. Insertion loss measured according to ISO 7235.

Special features

- Large areas can be provided by arranging multiple single sections horizontally and/or vertically (subdivided construction); single sections made of aluminium can also be combined into continuous horizontal runs
- Low differential pressure and low air-regenerated noise due to aerofoil blades
- Simple and quick installation due to perimeter border
- Free area of approx. 60 % (with insect screen approx. 45 %)
- Silicone free

Technical data

- Nominal sizes: 200 × 165 – 2400 × 1650/1600 × 2310 mm
- Width subdivided: up to 4900 mm
- Height subdivided: up to 4720 mm
- Continuous horizontal runs (WG-B-AL): Height 165 – 1980 mm
- Volume flow rate range (undivided construction): 40 – 13350 l/s or 144 – 48660 m³/h at 2.5 m/s
- Free area of approx. 60 % (with insect screen approx. 45 %)
- Total differential pressure – exhaust air: 30 Pa at 2.5 m/s
- Total differential pressure – fresh air: 35 Pa at 2.5 m/s

Sizing data

- \dot{V} _____ [m³/h]
- Δp_t _____ [Pa]
- L_{WA} air-regenerated noise _____ [dB(A)]

Order options

1 Type

WG External weather louvres

2 Material

No entry: galvanised sheet steel

- A2** Stainless steel
- AL** Aluminium

3 Construction

No entry: wire mesh, galvanised steel

- 1** Insect screen, galvanised steel (only WG, WG-AL)
- 2** Wire mesh, stainless steel (only WG-AL)
- 3** Wire mesh and insect screen, stainless steel (only WG-AL, WG-A2)
- U** Border without fixing holes
1, 2, 3 can be combined with U

4 Nominal size [mm]

B × H
(B × H > 4 m² when subdivided)

5 Installation subframe

No entry: none

- ER** With (not for construction U)

6 Surface

No entry: standard construction

- P1** Powder-coated, RAL CLASSIC colour
- PS** Powder-coated, DB colour
Only for WG-AL
- S2** Anodised to EURAS standard, E6-C-31...35
- S3** Anodised to EURAS standard, E6-C-0
Gloss level:
RAL 9010 50 %
RAL 9006 30 %
All other RAL colours 70 %

External weather louvres

Basic information and nomenclature

2



- Product selection
- Principal dimensions
- Nomenclature
- Sizing and sizing example

External weather louvres

Basic information and nomenclature

Product selection

	Type					
	WG	WGK	WGF	WG-JZ	WG-KUL	NL
Casing and blades						
Galvanised sheet steel	●		●	●	●	●
Stainless steel	●					
Aluminium	●	●	●	●	●	●
Blade pitch	82.5 mm	25 mm	125 mm	82.5 mm	82.5 mm	150 mm
Casing depth	83 / 95 mm	34 mm		265 mm	205 mm	300 / 600 mm
Border						
Without holes	●	●		●	●	
Flange holes	●	●		●	●	
Wire mesh						
Galvanised steel	●	●	●	●	●	
Stainless steel	●		●	●	●	
Insect screen						
Galvanised sheet steel	●	●		●	●	
Stainless steel	●	●		●	●	
Combinations						
Multileaf damper				●		
Non-return damper					●	
Sound reduction						●
Nominal sizes						
Width	200 – 2400 mm	97 – 1997 mm	200 – 2000 mm		200 – 1600 mm	300 – 1800 mm
Increment	1 mm	1 mm	1 mm	1 mm	1 mm	150 mm
Width subdivided	– 4900 mm		>			– 3600 mm
Continuous horizontal runs	●					
Height	165 – 2310 mm	97 – 1997 mm	250 – 2500 mm	180 – 1995 mm	180 – 1665 mm	300 – 2250 mm
Increment	1 mm	1 mm	125 mm	1 mm	1 mm	150 mm
Height subdivided	– 4720 mm		>			– 4500 mm
Free area						
External weather louvre only	60 %	60 %	50 %			11 – 29 %
With insect screen	45 %	45 %				
Accessories						
Installation subframe	●	●		●	●	
Surfaces						
Powder-coated	●	●	●	●	●	●
Anodised	●	●	●	●	●	
●	Possible					
	Not possible					

External weather louvres

Basic information and nomenclature

Principal dimensions

B [mm]

Duct width

B₁ [mm]

Duct width for subdivided louvres

H [mm]

Duct height

H₁ [mm]

Duct height for subdivided louvres

n []

Number of flange screw holes

m [kg]

Weight

Nomenclature

L_{WA} [dB(A)]

A-weighted sound pressure level of air-regenerated noise for the louvre

A [m²]

Upstream cross section

v [m/s]

Airflow velocity based on the upstream cross section

 \dot{V} [m³/h] and [l/s]

Volume flow rate

 Δp_t [Pa]

Total differential pressure

All sound power levels are based on 1 pW.

Sizing with the help of this catalogue

This catalogue provides convenient quick sizing tables for louvres. The tables give volume flow rates for all nominal sizes at an airflow velocity of 2.5 m/s. Sound power levels of the air-regenerated noise and differential pressures are given for various airflow velocities.

Sizing example

Given data

$$\dot{V} = 1400 \text{ l/s (5040 m}^3\text{/h)}$$

$$v = 2.5 \text{ m/s}$$

Fresh air, installation type B

Maximum width: 800 mm

Quick sizing

WG/800 × 825 mm

Calculation procedure

$$A = 0.80 \times (0.825 - 0.085) = 0.592 \text{ m}^2$$

$$v = \dot{V} / A = 1400 / 0.592 (\text{/1000}) = 2.4 \text{ m/s}$$

$$\Delta p_{st} = 35 \text{ Pa}$$

$$L_{WA} = 50 \text{ dB(A)}$$