

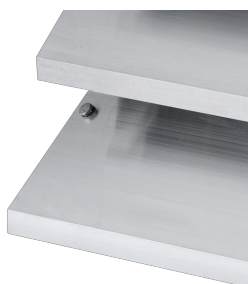


**EXTERNAL WEATHER
LOUVRE, VARIANT WGF-
AL-T**



REGULAR BLADES

Regular blades



BOTTOM BLADE

Bottom blade



**SERRATED ANGLE
SECTION**

Serrated angle section

WGF

SPECIFICALLY FOR FAÇADE INSTALLATION

External weather louvres – specifically for façade installation – 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 2000 mm, maximum height of 2500 mm per section
- For installation into façades or for the construction of enclosures for machinery or electrical equipment
- Low differential pressure due to aerofoil blades
- Low air-regenerated noise
- All aerodynamic data is measured in aerodynamics and acoustics laboratories
- Variants made of galvanised sheet steel or aluminium
- Flexible arrangement of sections for covering large areas (should to be fixed on the support structure provided by others)

Optional equipment and accessories

- Corner section
- Insect screen
- Powder-coated or with anodised finish

General Information



Application

- External weather louvres for fresh air and exhaust air openings of ventilation and 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.

Special features

- Low differential pressure and low noise due to aerofoil blades
- Large-size covering of air intake and discharge openings on external walls and of complete façades with a uniform look with regular blades, without obstructive borders
- Robust construction
- Very large dimensions (height and width) are available as any number of sections can be fitted side by side or on top of each other (support structure required)

Nominal sizes

Middle section

- B: 1000, 1200, 1400, 1600, 1800, 2000 mm (intermediate sizes: 201 – 1999 mm, in increments of 1 mm)
- H: 500, 625, 750, 875, 1000, 1250, 1500, 1750, 2000, 2250, 2500 mm (intermediate sizes: 1125 – 2375 mm in increments of 125 mm)
- Any combination of B × H

Corner section

- B: 600 × 600 mm (angle)
- H: 500, 625, 750, 875, 1000, 1250, 1500, 1750, 2000, 2250, 2500 mm (intermediate sizes: 1125 – 2375 mm in increments of 125 mm)

Variants

- WGF-T: Façade weather louvre made of galvanised sheet steel, middle section
- WGF-E: Façade weather louvre made of galvanised sheet steel, corner section
- WGF-AL-T: Façade weather louvre made of aluminium, middle section
- WGF-AL-E: Façade weather louvre made of aluminium, corner section

Construction

- Crimped wire mesh made of galvanised steel
- 2: Crimped wire mesh, stainless steel (only WGF-AL)

Parts and characteristics

- Serrated angle sections (left and right)
- Regular blades and bottom blade
- Crimped wire mesh
- Insect screen (optional)
- Fixing elements for the blades, serrated angle section (if B > 2000 mm: combination of several serrated angle sections) and crimped wire mesh

Construction features

- Serrated angle section, with fixing holes on side and rear, material thickness 3 mm
- Crimped wire mesh at the rear, mesh aperture 20 × 20 × 1.8 mm
- Optional insect screen at the rear, mesh aperture 1.25 × 1.25 × 0.4 mm

Materials and surfaces

- Blades made of formed, galvanised sheet steel or extruded aluminium sections
- Serrated angle sections made of formed, galvanised sheet steel
- Crimped wire mesh made of galvanised steel
- Serrated angle sections, powder-coated black (RAL 9005)
- P1: powder-coated, RAL CLASSIC colour
- PS: powder-coated, NCS or DB colour

Maintenance

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

Description



Variants

- WGF-T: Façade weather louvre made of galvanised sheet steel, middle section
- WGF-E: Façade weather louvre made of galvanised sheet steel, corner section
- WGF-AL-T: Façade weather louvre made of aluminium, middle section
- WGF-AL-E: Façade weather louvre made of aluminium, corner section

Parts and characteristics

- Serrated angle sections (left and right)
- Regular blades and bottom blade
- Crimped wire mesh
- Insect screen (optional)
- Fixing elements for the blades, serrated angle section (if B > 2000 mm: combination of several serrated angle sections) and crimped wire mesh

Accessories

Construction features

- Free area of approx. 50 %
- Serrated angle section, with fixing holes on side and rear, material thickness 3 mm
- Wire mesh at the rear, mesh aperture 20 x 20 x 1.8 mm
- Optional insect screen at the rear, mesh aperture 1.25 x 1.25 x 0.4 mm

Materials and surfaces

- Blades made of formed galvanised sheet steel or extruded aluminium sections
- Serrated angle sections made of formed galvanised sheet steel
- Wire mesh made of galvanised steel
- Serrated angle sections, powder-coated black (RAL 9005)
- P1: Powder-coated, RAL CLASSIC colour
- PS: Powder-coated, NCS or DB colour

Nominal sizes

Middle section

- B: 1000, 1200, 1400, 1600, 1800, 2000 mm (intermediate sizes: 201 – 1999 mm, in increments of 1 mm)
- H: 500, 625, 750, 875, 1000, 1250, 1500, 1750, 2000, 2250, 2500 mm (intermediate sizes: 1125 – 2375 mm in increments of 125 mm)
- Any combination of B x H

Corner section

- B: 600 x 600 mm (angle)
- H: 500, 625, 750, 875, 1000, 1250, 1500, 1750, 2000, 2250, 2500 mm (intermediate sizes: 1125 – 2375 mm in increments of 125 mm)

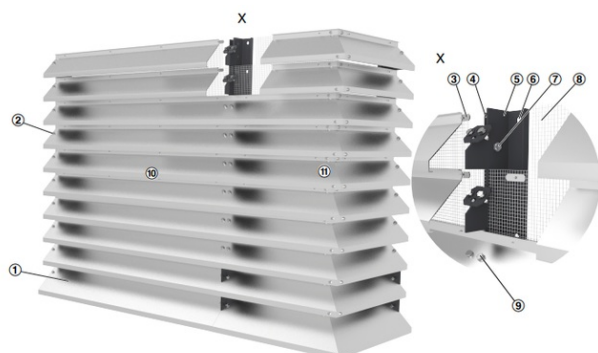
TECHNICAL INFORMATION

Function, Technical data, Quick sizing, Specification text, Order code



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, slight quantities of water could enter with the air. This is why the airflow velocity in fresh air openings should not exceed 2 – 2.5 m/s.

Schematic illustration of WGF



① Bottom blade

- ② Regular blades
- ③ Fixing element for crimped wire mesh
- ④ Serrated angle section, right side
- ⑤ Serrated angle section, left side
- ⑥ Fixing holes
- ⑦ Fixing element to join serrated angle sections
- ⑧ Crimped wire mesh; additional insect screen as an option
- ⑨ Fixing element for blades
- ⑩ Middle section WGF-AL-T
- Corner section WGF-AL-E

Nominal sizes (middle section)	1000 × 500 – 2000 × 2500 mm
Volume flow rate range (middle section)	940 – 11880 l/s or 3384 – 42768 m³/h

Quick sizing tables in the Easy Product Finder provide a good overview of the

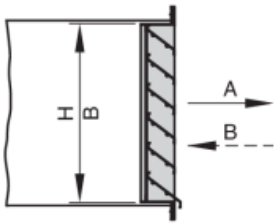
- Possible volume flow rates for different airflow velocities
- Corresponding pressure losses
- Sound power level
- Free areas

Precise values based on project-specific data can be determined with our Easy Product Finder design program.

You will find the Easy Product Finder on our website:

www.trox.de/mytrox/auslegungsprogramm-easy-product-finder-182e16348fac3d33

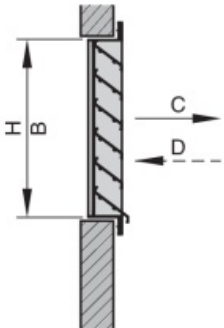
Duct installation into rectangular ducts (installation types A and B)



A Exhaust air

B Fresh air

Plenum installation (installation types C and D)



C Exhaust air

D Fresh air

Rectangular external weather louvres for façade installation, as a protection for air conditioning systems against the direct ingress of rain, leaves and birds into fresh air and exhaust air openings. Ready-to-install component which consists of a border, aerofoil rain defence blades, and a crimped wire mesh at the rear and serrated angle sections.

Special features

- Low differential pressure and low noise due to aerofoil blades
- Large-size covering of air intake and discharge openings on external walls and of complete façades with a uniform look with regular blades, without obstructive borders
- Robust construction
- Very large dimensions (height and width) are available as any number of sections can be fitted side by side or on top of each other (support structure required)

Materials and surfaces

- Blades made of formed, galvanised sheet steel or extruded aluminium sections
- Serrated angle sections made of formed, galvanised sheet steel
- Crimped wire mesh made of galvanised steel
- Serrated angle sections, powder-coated black (RAL 9005)
- P1: powder-coated, RAL CLASSIC colour
- PS: powder-coated, NCS or DB colour

Construction

- Crimped wire mesh made of galvanised steel
- 2: Crimped wire mesh, stainless steel (only WGF-AL)

Technical data

- Nominal sizes (middle section): 1000 × 500 – 2000 × 2500 mm

Sizing data

- q_v [m³/h]
- Δp_t [Pa]

Air-regenerated noise

- L_{WA} [dB(A)]

WGF	–	AL	–	T	–	2	/	1400 × 875	/	P1 – RAL 9016
1		2		3		4		5		6

1 Type
WGF External weather louvres for façades

2 Material
No entry required: galvanised steel
AL Aluminium

3 Section
E Corner section
T Middle section

4 Construction
No entry required: crimped wire mesh, galvanised steel
1 Crimped wire mesh and insect screen, galvanised steel
2 Crimped wire mesh, stainless steel (only for material AL)
3 Crimped wire mesh and insect screen, stainless steel

5 Nominal size [mm]
B × H

6 Surface
No entry required: standard construction
P1 powder-coated, specify RAL CLASSIC colour

Only for WGF-AL
S2 with anodised finish, specify EURAS standard colour (31 – 35)
S3 with anodised finish, E6-C-0, colour according to EURAS standard

Gloss level
RAL 9010 GU50
RAL 9006 GU30
All other RAL colours GU30

If middle sections and corner sections are arranged in vertical tiers, the upper sections will have only regular blades. The lower sections contain only one lower end blade each. Sections to be used as upper sections must be specified when ordering.

Order example: WGF–T/1600×1250/P1–RAL 7001
Material Galvanised steel
Section Middle section
Construction Crimped wire mesh, galvanised steel
Nominal size 1600 × 1250 mm
User interface Powder-coated, RAL 7001, silver

WGF-T, weights [kg]

H [mm]	B [mm]									
	500	600	800	1000	1200	1400	1600	1800	2000	
375	8	9	10	12	13	15	16	18	19	
500	11	12	14	16	17	19	21	23	25	
625	13	14	17	19	22	24	26	29	31	
750	16	17	20	23	26	28	31	34	37	
875	18	20	23	27	30	33	36	40	43	
1000	21	23	26	30	34	38	41	45	49	
1125	23	25	30	34	38	42	47	51	55	
1250	26	28	33	38	42	47	52	56	61	
1375	28	31	36	41	46	52	57	62	67	
1500	31	34	39	45	51	56	62	67	73	
1625	33	36	42	49	55	61	67	73	79	
1750	36	39	46	52	59	65	72	78	85	
1875	38	42	49	56	63	70	77	84	91	
2000	41	45	52	60	67	75	82	90	97	
2125	43	47	55	63	71	79	87	95	103	
2250	46	50	58	67	75	84	92	101	109	
2375	48	53	62	71	79	88	97	106	115	
2500	51	55	65	74	84	93	102	112	121	

WGF-AL-T, weights [kg]

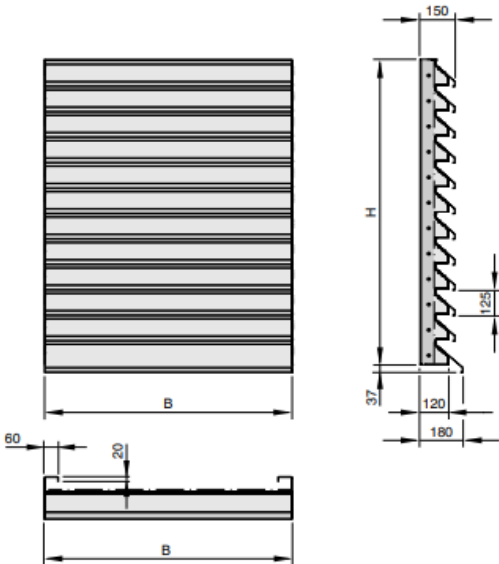
H [mm]	B [mm]									
	500	600	800	1000	1200	1400	1600	1800	2000	
375	7	8	9	9	10	11	11	12	13	
500	10	10	11	12	13	14	15	16	17	
625	12	12	13	15	16	17	19	20	21	
750	14	14	16	18	19	21	22	24	26	
875	16	16	18	20	22	24	26	28	30	
1000	18	19	21	23	25	27	30	32	34	
1125	20	21	23	26	28	31	33	36	38	
1250	22	23	26	29	31	34	37	40	43	
1375	24	25	28	31	34	38	41	44	47	
1500	26	27	31	34	37	41	44	48	51	
1625	28	29	33	37	41	44	48	52	55	
1750	30	32	36	40	44	48	52	56	60	
1875	32	34	38	42	47	51	55	60	64	
2000	34	36	40	45	50	54	59	64	68	
2125	36	38	43	48	53	58	63	68	72	
2250	38	40	45	51	56	61	66	71	77	
2375	40	42	48	53	59	64	70	75	81	
2500	42	44	50	56	62	68	74	79	85	

WGF, corner section, weights [kg]

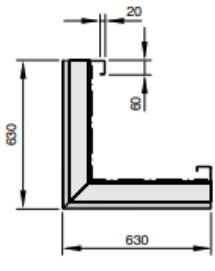
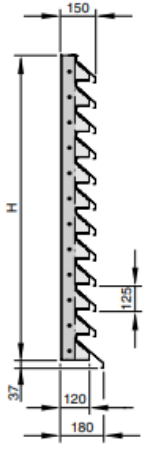
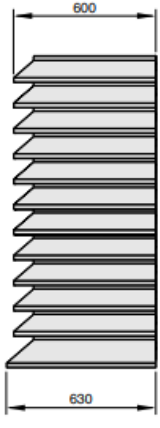
B [mm]: 600 × 600

H [mm]	WGF-E	WGF-AL-E
375	13	10
500	17	13
625	21	16
750	25	19
875	30	22
1000	34	25
1125	38	28
1250	42	31
1375	46	34
1500	50	37
1625	55	40
1750	59	43
1875	63	46
2000	67	49
2125	71	52
2250	75	55
2375	79	58
2500	84	61

WGF, middle section



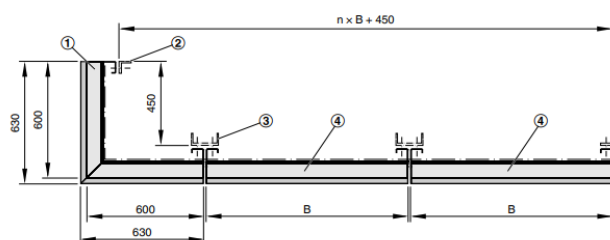
WGF, corner section



Installation and commissioning

- Fix the top and bottom blades to both serrated angle sections
- Align the serrated angle sections with both blades to the support structure and fix it (fixing material to be provided by others)
- Fix the remaining blades to the serrated angle sections
- Fix crimped wire mesh to the rear of the blades
- Install additional sections
- Connect the serrated angle sections of the louvre sections with each other

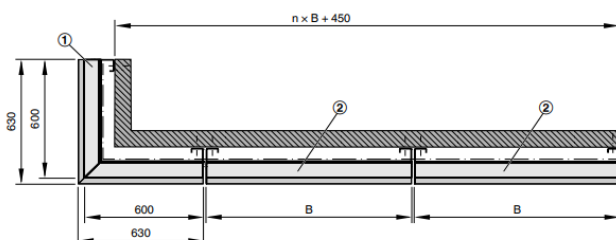
5 Façade installation on support structure



n = any number of middle sections

- ① Corner section (WGF-E)
- ② Support structure provided by others, e.g. angle section
- ③ Support structure provided by others, e.g. U-channel section
- ④ Middle section (WGF-T)

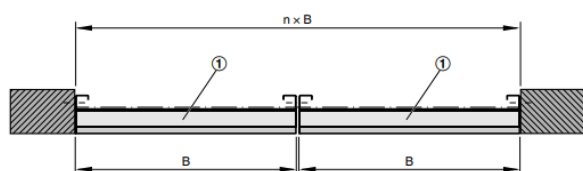
Wall installation



n = any number of middle sections

- ① Corner section (WGF-E)
- ② Middle section (WGF-T)

Wall installation



n = any number of middle sections

- ① Middle section (WGF-T)