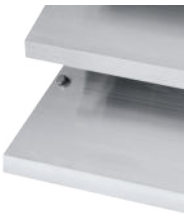
Regular blades



Bottom blade

Serrated angle section

External louvres

WGF

Especially for façade construction

External weather louvres (specifically for facade installation) as a protection of air conditioning systems against the direct ingress of rain, and against the passage of leaves and birds through outdoor air and exhaust air openings.

- Maximum width 2000 mm, maximum height 2500 mm, per segment
- For the installation into façades or for enclosing technical systems
- Low differential pressure due to aerofoil blades
- Low air-regenerated noise
- All aerodynamic data measured in aerodynamic and acoustics laboratories
- Variants made of galvanised sheet steel or aluminium
- Flexible arrangement of segments and large areas possible by mounting on a support structure, provided by the customer

Optional equipment and accessories

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

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 characteristics
- Low pressure loss and low air-generated noise due to aerofoil blades
- Large-size covering of air intake and discharge openings on external walls and of complete façades with uniform blades, without front borders
- Robust construction
- Large dimensions in height and width can be realised using a support structure. Any number of segments can be arranged next to and on top of each other

Nominal sizes
Middle section
- B: 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000 mm (intermediate sizes: 201 – 1999 mm in increments of 1 mm)
- H: 250, 375, 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 possible

Corner section
- B: 600 × 600 mm (across corner)
- H: 250, 375. 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, galvanised steel
- 1: Crimped wire mesh and insect screen, galvanised steel
- 2: Crimped wire mesh, stainless steel (only WGF-AL)
- 3: Crimped wire mesh and insect screen, 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 or stainless steel
- Serrated angle sections, powder-coated, black (RAL 9005)
- P1: Blades powder-coated, without fixing material, RAL CLASSIC colour

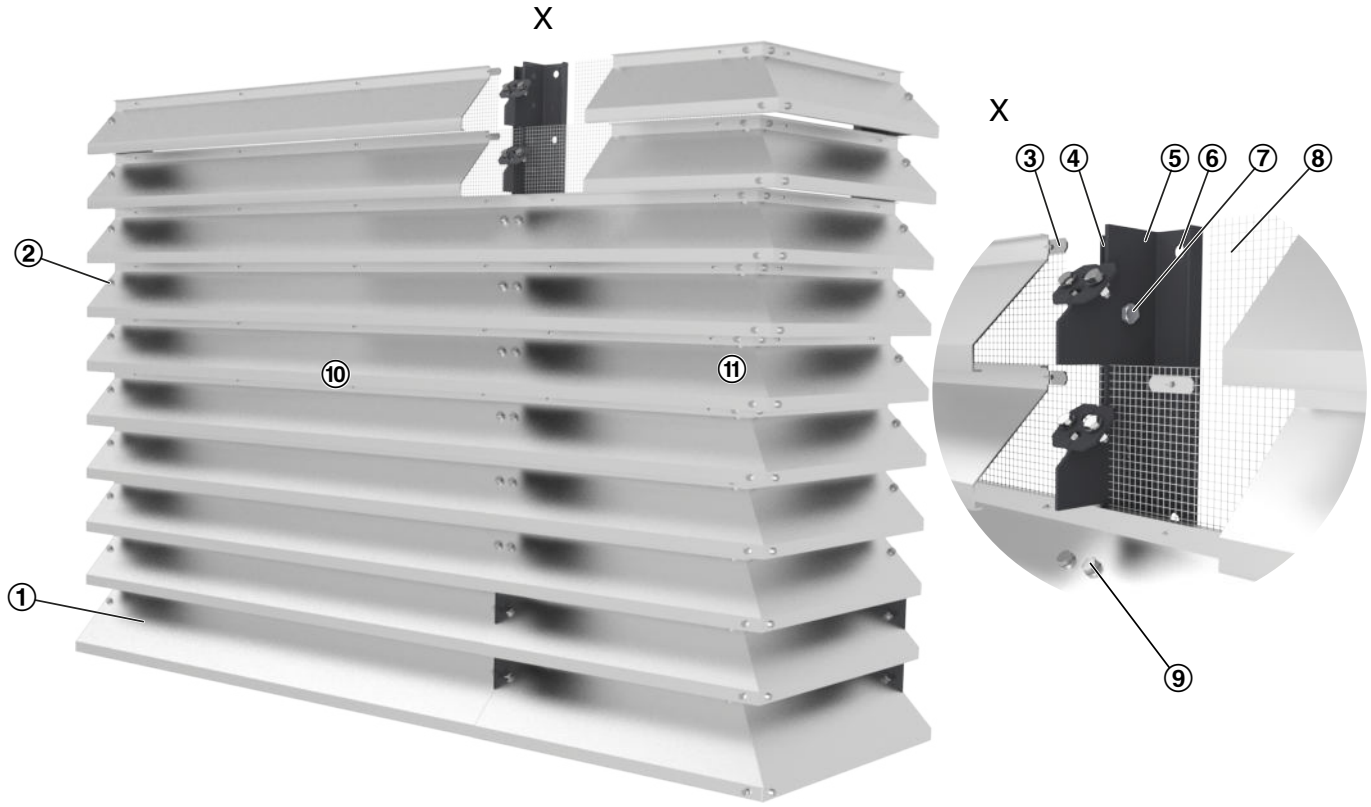
Only for material AL
- S2 blades anodised. Please specify EURAS standard colour (E6-C-31 - E6-C-35)
- S3 blades anodised, E6-C-0 (colourless)

Maintenance
- Low maintenance as construction and materials are not subject to wear and tear
- Inspection and cleaning according to VDI 6022

Function

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
⑪ Corner section WGF-AL-E

Technical data

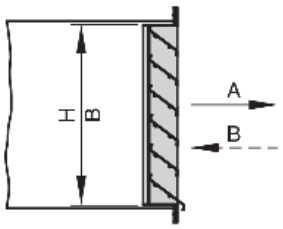
Nominal sizes (middle section)	1000 × 500 – 2000 × 2500 mm
Volume flow rate range (middle section)	940 – 11880 l/s or 3384 – 42768 m³/h

Quick sizing

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

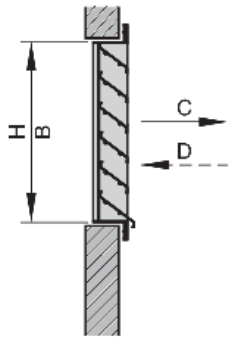
Precise values based on project-specific data can be determined with our Easy Product Finder design program.
You will find the Easy Product Finder on our website:
www.trox.de/mytrox/auslegungsprogramm-easy-poduct-finder-182e16348fac3d33

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

Specification text

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

Rectangular external weather louvres for façade installation, as a protection against the direct ingress of rain, and against the passage of leaves and birds through outdoor air and exhaust air openings.
Kit consisting of rain-repellent aerofoil blades, crimped wire mesh on the back and serrated angle sections.

Special features

- Low pressure loss and low air-generated noise due to aerofoil blades
- Large-size covering of air intake and discharge openings on external walls and of complete façades with uniform blades, without front borders
- Robust construction
- Large dimensions in height and width can be realised using a support structure. Any number of segments can be arranged next to and on top of each other

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 or stainless steel
- Serrated angle sections, powder-coated, black (RAL 9005)
- P1: Blades powder-coated, without fixing material, RAL CLASSIC colour

Only for material AL

- S2 blades anodised. Please specify EURAS standard colour (E6-C-31 - E6-C-35)
- S3 blades anodised, E6-C-0 (colourless)

Construction

- Crimped wire mesh, galvanised steel
- 1: Crimped wire mesh and insect screen, galvanised steel
- 2: Crimped wire mesh, stainless steel (only WGF-AL)
- 3: Crimped wire mesh and insect screen, stainless steel (only WGF-AL)

Technical data

- Nominal sizes (middle section): 200 × 250 – 2000 × 2500 mm

Sizing data

- q_v [m³/h]
- Δp_t [Pa]

Air-regenerated noise

- L_{WA} [dB(A)]

Order code

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: galvanised sheet steel
AL Aluminium

3 Section
E Corner section
T Middle section

4 Construction variant
No entry: 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 (only for material AL)

5 Nominal size [mm]
Specify width × height

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

Only for WGF-AL
S2 anodised, specify EURAS standard colour (E6-C-31 – E6-C-35)
S3 anodised, E6-C-0 (no colour)

Gloss level
RAL 9010 GU 50
RAL 9006 GU 30
All other RAL colours GU 30

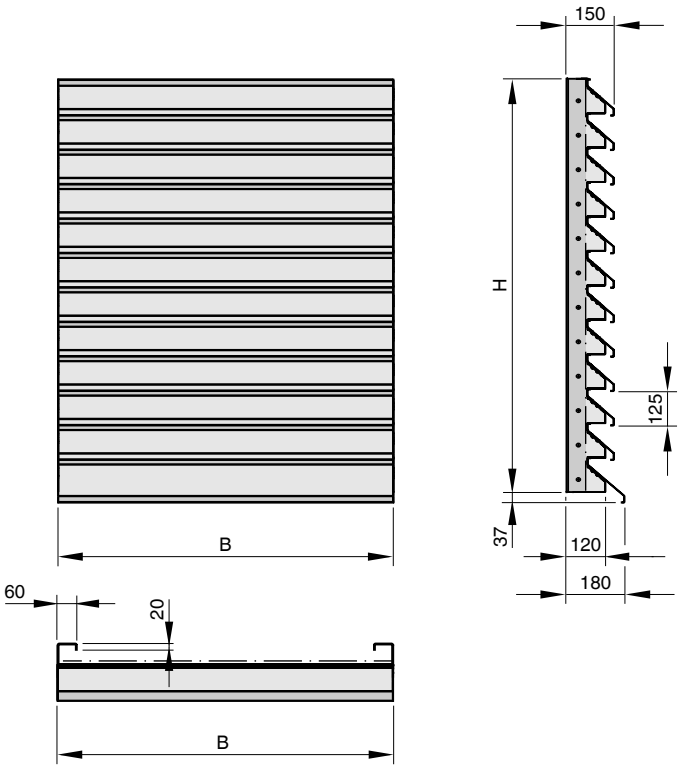
Note: If middle sections and corner sections are arranged in vertical tiers, the upper sections will have only regular blades. The lower sections will have one bottom blade each. Sections to be used as upper sections must be specified when ordering.

Order example: WGF-AL-T-2/1400×875/P1-RAL9016

Type	WGF - External weather louvres for façades
Material	Aluminium
Section	Middle section
Construction	with crimped wire mesh, stainless steel
Nominal size [mm]	Width 1400, height 875
Surface	powder-coated, RAL 9016 (traffic white)

Dimensions and weight

WGF, middle section



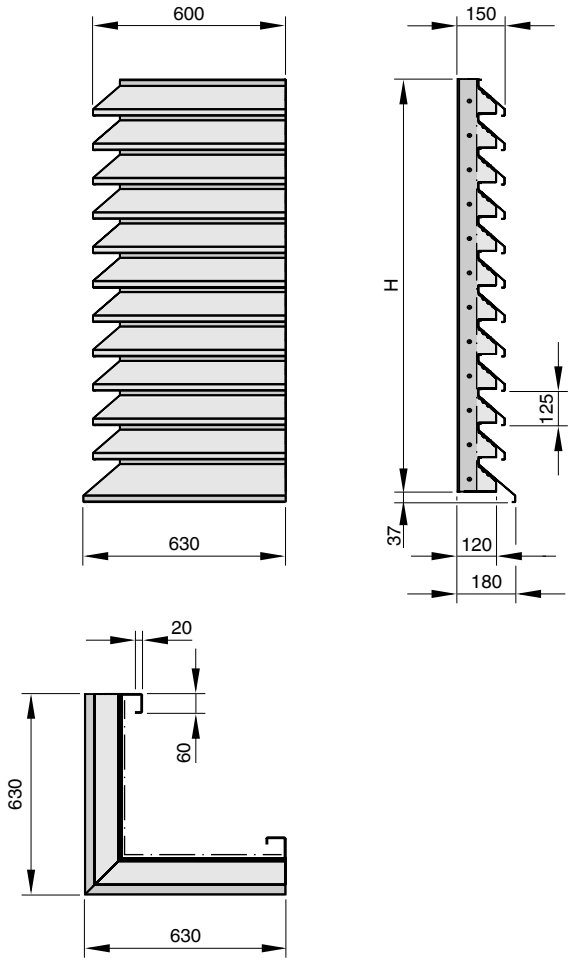
WGF-T, weights [kg]

H [mm]	B [mm]									
	200	500	600	800	1000	1200	1400	1600	1800	2000
375	6	8	9	10	12	13	15	16	18	19
375	4	8	9	10	12	13	15	16	18	19
500	8	11	12	14	16	17	19	21	23	25
625	10	13	14	17	19	22	24	26	29	31
750	12	16	17	20	23	26	28	31	34	37
875	13	18	20	23	27	30	33	36	40	43
1000	15	21	23	26	30	34	38	41	45	49
1125	17	23	25	30	34	38	42	47	51	55
1250	19	26	28	33	38	42	47	52	56	61
1375	21	28	31	36	41	46	52	57	62	67
1500	22	31	34	39	45	51	56	62	67	73
1625	24	33	36	42	49	55	61	67	73	79
1750	26	36	39	46	52	59	65	72	78	85
1875	28	38	42	49	56	63	70	77	84	91
2000	30	41	45	52	60	67	75	82	90	97
2125	31	43	47	55	63	71	79	87	95	103
2250	33	46	50	58	67	75	84	92	101	109
2375	35	48	53	62	71	79	88	97	106	115
2500	37	51	55	65	74	84	93	102	112	121

WGF-AL-T, weights [kg]

H [mm]	B [mm]									
	200	500	600	800	1000	1200	1400	1600	1800	2000
375	6	7	8	9	9	10	11	11	12	13
375	5	7	8	9	9	10	11	11	12	13
500	8	10	10	11	12	13	14	15	16	17
625	10	12	12	13	15	16	17	19	20	21
750	11	14	14	16	18	19	21	22	24	26
875	13	16	16	18	20	22	24	26	28	30
1000	14	18	19	21	23	25	27	30	32	34
1125	16	20	21	23	26	28	31	33	36	38
1250	17	22	23	26	29	31	34	37	40	43
1375	19	24	25	28	31	34	38	41	44	47
1500	20	26	27	31	34	37	41	44	48	51
1625	22	28	29	33	37	41	44	48	52	55
1750	23	30	32	36	40	44	48	52	56	60
1875	25	32	34	38	42	47	51	55	60	64
2000	27	34	36	40	45	50	54	59	64	68
2125	28	36	38	43	48	53	58	63	68	72
2250	30	38	40	45	51	56	61	66	71	77
2375	31	40	42	48	53	59	64	70	75	81
2500	33	42	44	50	56	62	68	74	79	85

WGF, corner section



WGF, corner section, weights [kg]

B [mm]: 600 × 600

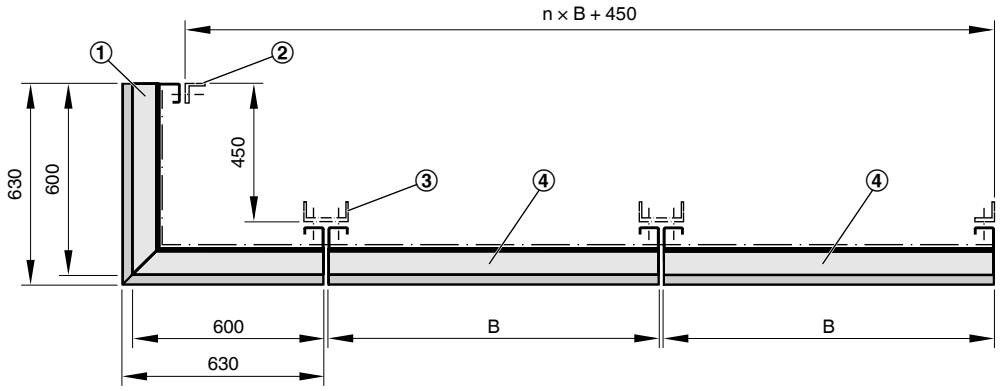
H [mm]	WGF-E	WGF-AL-E
375	13	10
375	13	10
500	17	13
625	21	16
750	25	19
875	30	22
1000	34	25
1125	38	28
1250	42	31
1375	46	34
1500	50	37
1625	55	40
1750	59	43
1875	63	46
2000	67	49
2125	71	52
2250	75	55
2375	79	58
2500	84	61

Product details

Installation and commissioning

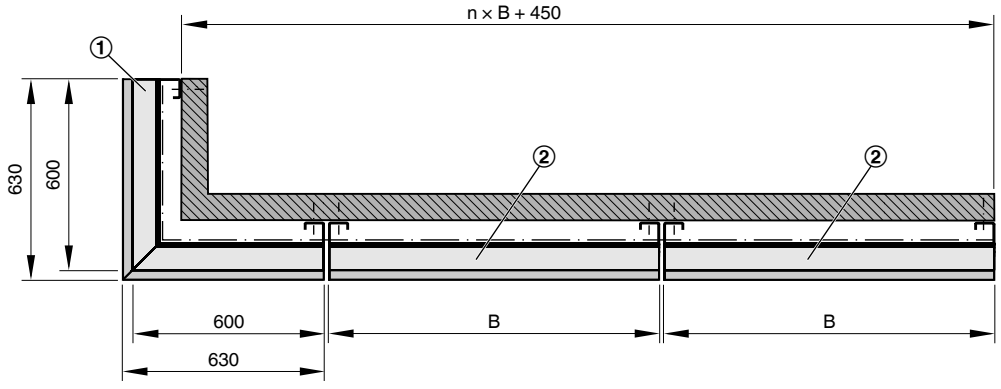
- Follow the installation manual and comply with generally accepted engineering practice in order to achieve the given performance data
- The weight of the external weather louvre must be supported by suitable on-site fastening material

Mounting on support structure



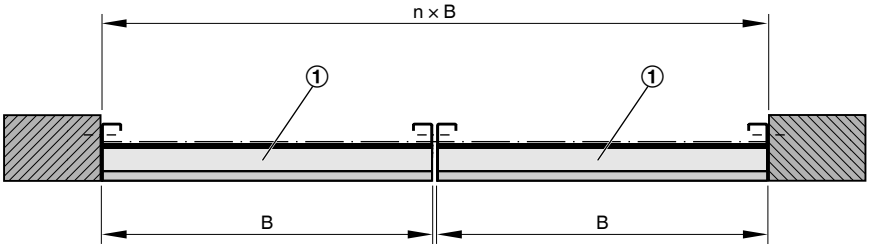
n = any number of middle sections
① Corner section (WGF-E)
② Support structure provided by others, e.g. angle section
③ Support structure provided by others, e.g. U-channel section
④ Middle section (WGF-T)

Mounting on walls



n = any number of middle sections
① Corner section (WGF-E)
② Middle section (WGF-T)

Installation in wall openings



n = any number of middle sections
① Middle section (WGF-T)

Explanation

B [mm]
Duct width

H [mm]
Duct height

Δp_t [Pa]
Total differential pressure

L_{WA} [dB(A)]
A-weighted sound power level of air-regenerated noise for the louvre

m [kg]
Weight

qv [m³/h]; [l/s]
Volume flow rate

v [m/s]
Airflow velocity based on the upstream cross section