



**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 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 × 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
- 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 × 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)

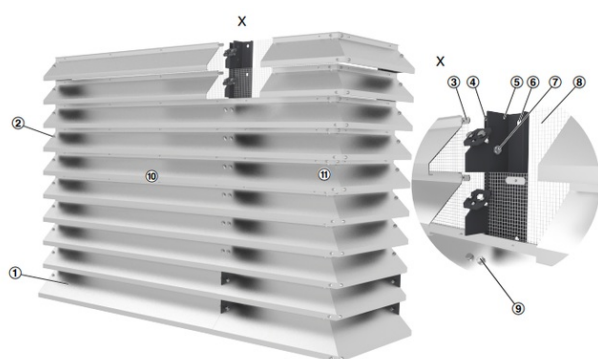
INFORMATION TECHNIQUE

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
- ⑪ Corner section WGF-AL-E

| | |
|---|--------------------------------------|
| Nominal sizes (middle section) | 1000 x 500 – 2000 x 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

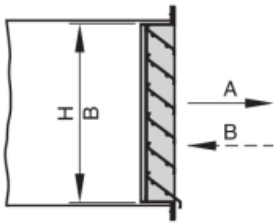
- Possible volume flow rates for different airflow velocities
- Corresponding pressure losses
- Sound power level
- Free areas

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:

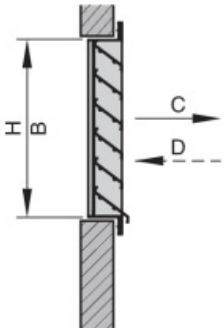
www.trox.de/mytrox/auslegungsprogramm-easy-product-finder-182e16348fac3d33

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 x 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 x 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/1600x1250/P1-RAL 7001

Material Galvanised steel

Section Middle section

Construction Crimped wire mesh, galvanised steel

Nominal size 1600 x 1250 mm

User interface Powder-coated, RAL 7001, silver

Dimensions and weight, Product details



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]

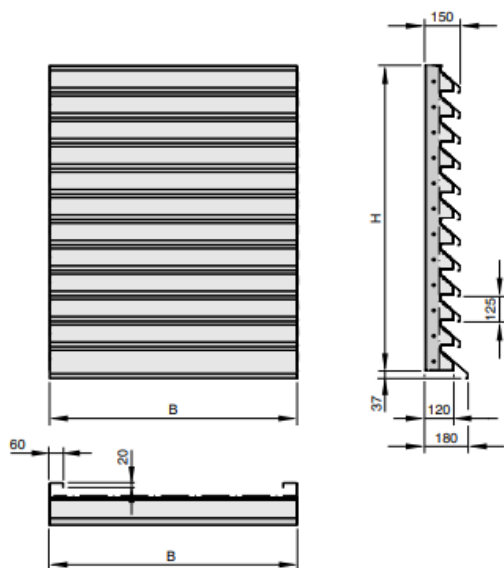
| H [mm] | B [mm] | | | | | | | | |
|--------|--------|-----|-----|------|------|------|------|------|------|
| | 500 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 375 | 7 | 8 | 9 | 9 | 10 | 11 | 11 | 12 | 13 |
| 500 | 10 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 625 | 12 | 12 | 13 | 15 | 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]

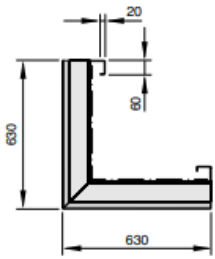
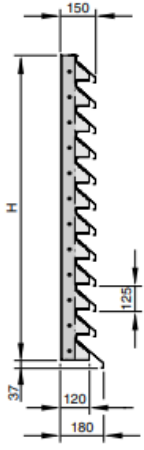
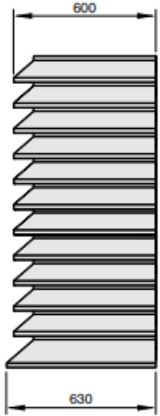
B [mm]: 600 × 600

| 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



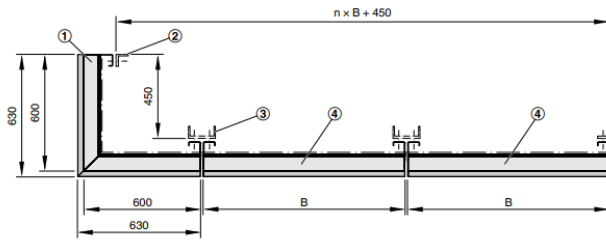
WGF, corner section



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

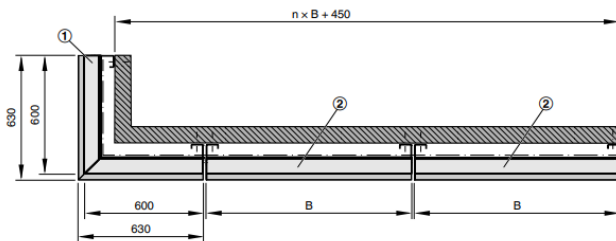
1 Façade installation on support structure



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)

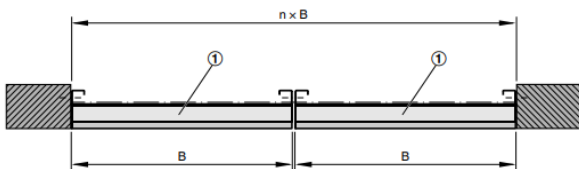
Wall installation



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)