

Regular blades



Bottom blade

External louvres

WGK



With small blade pitch

External weather louvres to protect ventilation and air conditioning systems against the direct ingress of rain, leaves and birds into fresh air and exhaust air openings.

- Maximum width of 1997 mm, maximum height of 1997 mm
- 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

Optional equipment and accessories

- Installation subframe
- Insect screen
- Powder-coated or with anodised finish

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General information

Application
- External weather louvres with small blade pitch, for the 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 outdoor air openings 2 – 2.5 m/s max.

Special characteristics
- Low differential pressure and low air-regenerated noise due to aerofoil blades
- Simple and quick installation due to perimeter border
- Silicone free

Nominal sizes
- B: 97, 147, 197, 297, 397, 497, 597, 797, 997, 1197, 1397, 1597, 1797, 1997 mm (intermediate sizes 98 – 1996 mm in increments of 1 mm)
- H: 97,147, 197, 247, 297, 347, 397, 447, 497, 597, 797, 997, 1197, 1397, 1597, 1797, 1997 mm (intermediate sizes 122 – 1972 mm in increments of 25 mm)

Construction
Cover grille
- Crimped wire mesh
- 1: With insect screen, galvanised steel
- 3: With insect screen, stainless steel

Front border
- With holes
- U: without holes

Parts and characteristics
- Front border
- Regular blades and bottom blade
- Crimped wire mesh
- Insect screen (optional)
- Visible stabilising mullion from B = 597 mm, two mullions from B = 1198 mm, three mullions from B = 1797 mm

Accessories
- Installation subframes for the fast and simple installation of external weather louvres

Construction features
- Border, material thickness 1.3 mm
- Blades, material thickness 1.35 mm
- Crimped wire mesh at the rear, mesh aperture 6 × 6 × 0.63 mm
- Optional insect screen at the rear, mesh aperture 1.25 × 1.25 × 0.4 mm
- Border fixing holes

Materials and surfaces
- Border, blades and stabilising mullions made of extruded aluminium sections, material no. EN AW-6060 T66, with anodised finish, colour to EURAS standard E6-C-0, natural colour
- Crimped wire mesh made of galvanised steel
- P1: powder-coated, RAL CLASSIC colour
- PS: powder-coated, NCS or DB colour

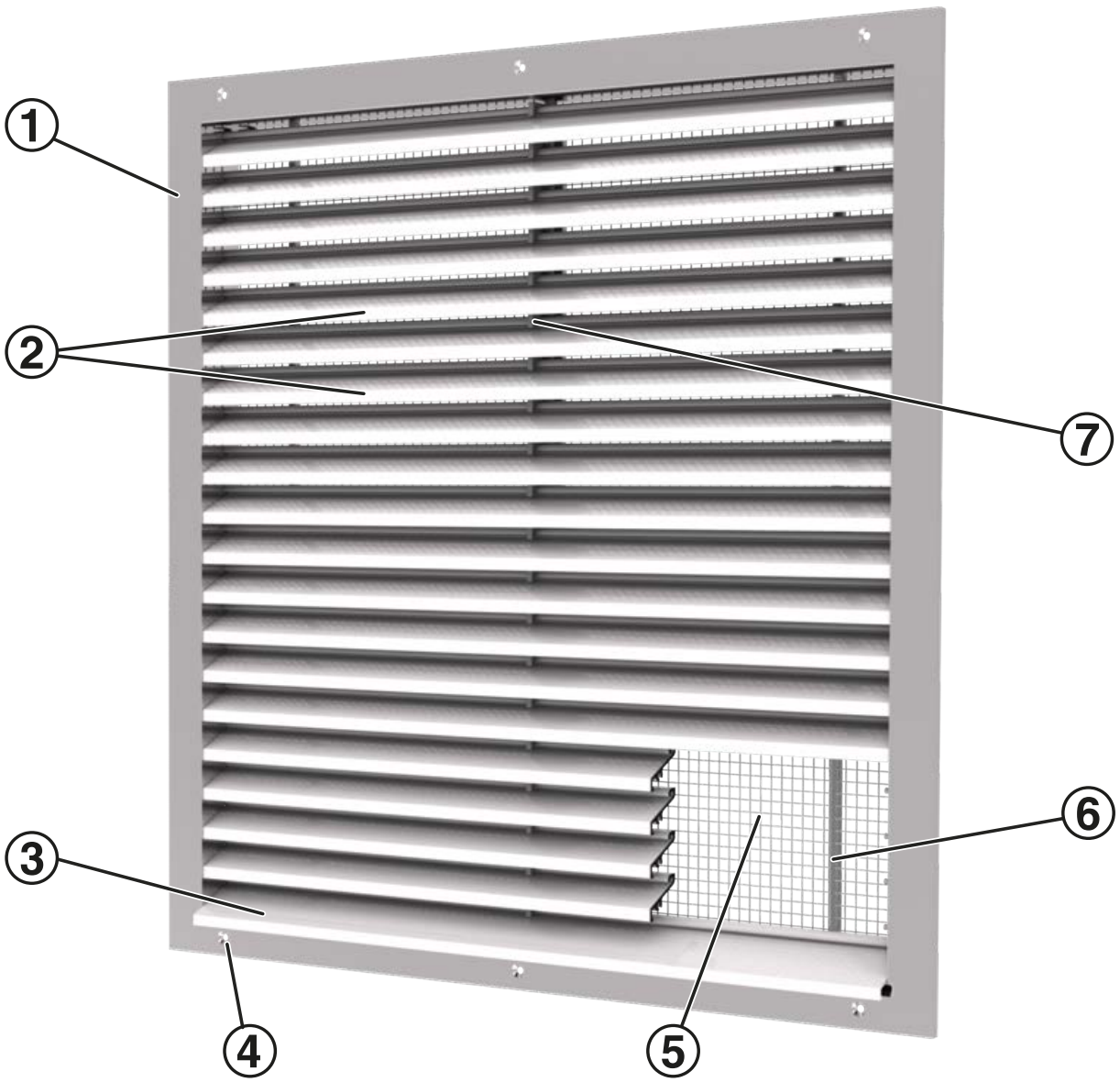
Maintenance
- Maintenance-free, as construction and materials are not subject to wear

Disclosure of Chemicals
- RoHS EU Directive 2011/65/EU (RoHS)
  - This product or single variants comply with EU Directive 2011/65/EU (RoHS) on the restriction of the use of certain hazardous substances in electrical and electronic equipment. For more information, please refer to our Environmental Product Declarations
- REACH 1907/2006 (EC Regulation REACH)
  - This product or single variants comply with the provisions of EC Regulation No. 1907/2006, also known as REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals). For more information, please refer to our Environmental Product Declarations

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 WGK-AL



① Front border
② Regular blades
③ Bottom blade
④ Fixing holes
⑤ Crimped wire mesh; additional insect screen as an option
⑥ Reinforcing strut from H = 597
⑦ Stabilising mullion from B = 597

Technical data

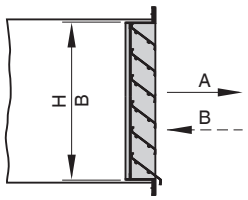
Nominal sizes	97 × 97 – 1997 × 997 mm/1197 × 1997 mm

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

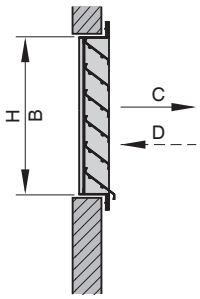
Precise values based on project-specific data can be determined with our Easy Product Finder design program.
You will find the Easy Product Finder on our website:
www.trox.de/mytrox/auslegungsprogramm-easy-poduct-finder-182e16348fac3d33

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 louvre 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 bird mesh at the rear.

Special features

- Low differential pressure and low air-regenerated noise due to aerofoil blades
- Simple and quick installation due to perimeter border
- Silicone free

Materials and surfaces

- Border, blades and stabilising mullions made of extruded aluminium sections, material no. EN AW-6060 T66, with anodised finish, colour to EURAS standard E6-C-0, natural colour
- Crimped wire mesh made of galvanised steel
- P1: powder-coated, RAL CLASSIC colour
- PS: powder-coated, NCS or DB colour

Construction

Cover grille

- Crimped wire mesh
- 1: With insect screen, galvanised steel
- 3: With insect screen, stainless steel

Front border

- With holes
- U: without holes

Technical data

- Nominal sizes: 97 × 97 – 1997 × 997 mm / 1197 × 1997 mm

Sizing data

q_v [m³/h]
Δp_t [Pa]
Air-regenerated noise
L_{WA} [dB(A)]

Order code

WGK – AL – 1 – / 1197 × 797 / ER / P1 - RAL 9006
1 2 3 4 5 6 7

1 Type
WGK External weather louvre with small blade pitch

2 Material
AL Aluminium

3 Construction
No entry: crimped wire mesh, galvanised steel
1 Insect screen, galvanised steel
3 Insect screen, stainless steel

4 Front frame
No entry: with fixing holes
U without holes

5 Nominal size [mm]
Specify size width × height

6 Installation subframe
No entry: without installation subframe
ER With installation subframe (not with border U)

7 Surface
No entry: anodised, E6-C-0 (no colour)
P1 powder-coated, specify RAL CLASSIC colour
S2 Anodised to EURAS standard, specify colour (E6-C-31 – E6-C-35)

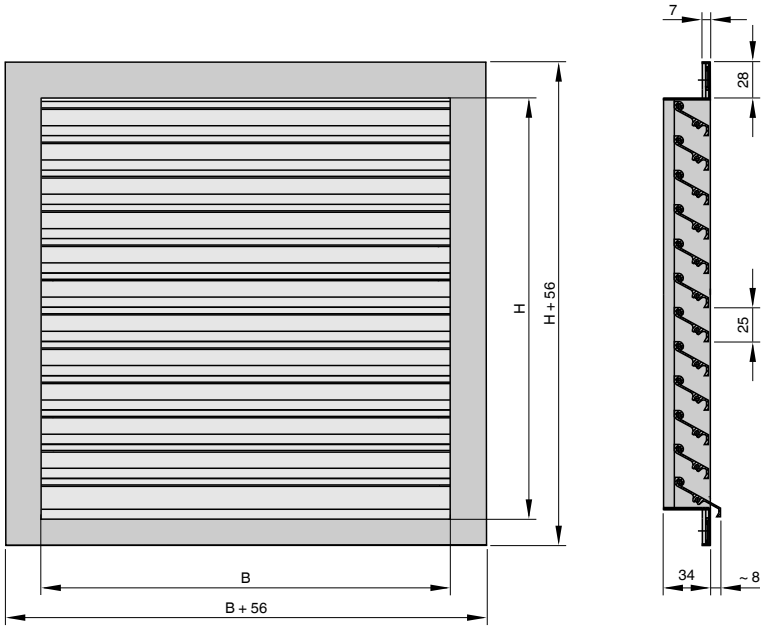
Gloss level
RAL 9010 GU 50
RAL 9006 GU 30
All other RAL colours GU 70

Order example: WGK–AL–1/997×1622/P1–RAL 9006

Material	Aluminium
Construction	Insect screen, galvanised steel
Nominal size	997 × 1622 mm
Installation subframe	None
User interface	Powder-coated, RAL 9006, white aluminium

Dimensions and weight

WGK



WGK, width 97 – 997 mm, weights [kg]

H [mm]	B [mm]										
	97	147	197	297	397	497	597	697	797	897	997
97	1	1	1	1	1	1	1	1	1	1	2
147	1	1	1	1	1	1	1	1	2	2	2
197	1	1	1	1	1	2	2	2	2	2	3
247	1	1	1	1	2	2	2	2	3	3	3
297	1	1	1	2	2	2	3	3	3	3	4
347	1	1	1	2	2	3	3	3	4	4	4
397	1	1	2	2	2	3	3	4	4	4	5
447	1	1	2	2	3	3	4	4	4	5	5
497	1	1	2	2	3	3	4	4	5	5	6
597	1	2	2	3	3	4	5	5	6	6	7
797	1	2	3	4	4	5	6	7	8	8	9
997	1	2	3	4	5	6	7	8	9	10	11
1197	2	3	4	5	6	8	9	10	11	12	14
1397	2	3	5	6	7	9	10	12	13	14	16
1597	2	4	5	7	8	10	12	13	15	16	18
1797	2	4	6	8	9	11	13	15	17	18	20
1997	2	4	6	8	10	12	14	16	18	20	22

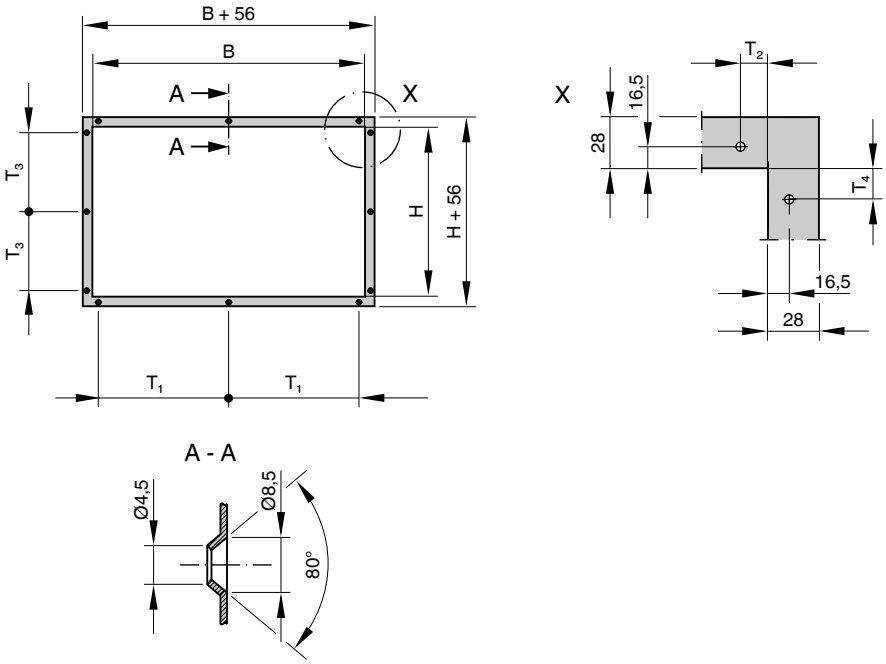
WGK, width 1097 – 1997 mm, weights [kg]

H [mm]	B [mm]									
	1097	1197	1297	1397	1497	1597	1697	1797	1897	1997
97	2	2	2	2	3	3	3	3	3	3
147	2	2	3	3	3	3	3	4	4	4
197	3	3	3	3	4	4	4	4	4	5
247	3	4	4	4	4	5	5	5	5	6
297	4	4	5	5	5	6	6	6	6	7

H [mm]	B [mm]									
	1097	1197	1297	1397	1497	1597	1697	1797	1897	1997
347	5	5	5	6	6	6	7	7	7	8
397	5	6	6	6	7	7	8	8	8	9
447	6	6	7	7	8	8	9	9	9	10
497	6	7	7	8	8	9	9	10	10	11
597	8	8	9	9	10	11	11	12	12	13
797	10	11	12	12	13	14	15	16	16	17
997	12	13	14	15	16	17	18	19	20	21
1197	15	16	17	18	20	21	22			
1397	17	19	20	21	23					
1597	20	21	23							
1797	22									
1997										

Product details

Border fixing holes, WGK



WGK, standard sizes, width B, no. of flange holes n

B [mm]	Number of holes n	T_1 [mm]	T_2 [mm]
97	1	–	B/2
147	1	–	B/2
197	1	–	B/2
297	2	262	17.5
397	2	362	17.5
497	3	231	17.5

B [mm]	Number of holes n	T_1 [mm]	T_2 [mm]
597	3	281	17.5
797	3	381	17.5
997	4	321	17.5
1197	4	387	17.5
1397	5	341	17.5
1597	5	391	17.5
1797	6	352	17.5
1997	6	392	17.5

WGK, standard sizes, height H, no. of flange holes n

H [mm]	Number of holes n	T_3 [mm]	T_4 [mm]
97	0	–	–
147	0	–	–
197	0	–	–
297	0	–	–
397	0	–	–
497	0	–	–
597	3	281	17.5
797	3	381	17.5
997	4	321	17.5
1197	4	387	17.5
1397	5	341	17.5
1597	5	391	17.5
1797	6	352	17.5
1997	6	392	17.5

WGK, intermediate sizes, width B, no. of flange holes n

B [mm]	Number of holes n	T_1 [mm]	T_2 [mm]
97 – 296	1	–	B/2
298 – 396	2	B - 35	17.5
398 – 796	3	(B - 35)/2	17.5
798 – 1396	4	(B - 35)/3	17.5
1398 – 1796	5	(B - 35)/4	17.5
1798 – 1996	6	(B - 35)/5	17.5

WGK, intermediate sizes, height H, no. of flange holes n

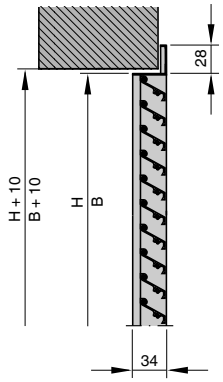
H [mm]	Number of holes n	T_3 [mm]	T_4 [mm]
122 – 572	0	–	–
622 – 772	3	(H - 35)/2	17.5
822 – 1372	4	(H - 35)/3	17.5
1422 – 1772	5	(H - 35)/4	17.5
1822 – 1972	6	(H - 35)/5	17.5

Installation details

Installation and commissioning

- Installation with or without installation subframe

Wall installation without installation subframe



Nomenclature

B [mm]
Width

H [mm]
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

q_v [m³/h]; [l/s]
Volume flow rate

v [m/s]
Airflow velocity with regard to the inflow area

Lengths [mm]
All lengths are given in millimetres [mm] unless stated otherwise.