

# AKR SOUND-INSULATING GRILLES

Merford AKR grilles are ideal for locations requiring ventilation grilles with insulation values ranging from 11-21 dB, as well as low air resistance and minimum installation depth. They are outdoor grilles that combine ventilation and sound insulation in a single product. The design of the AKR sound-insulating grille allows it to be integrated into any desired architecture, geometry or colour scheme.



## Applications

Merford sound-insulating ventilation grilles have been specifically designed for a wide range of applications where large air volumes over a grille are required but where installation space is limited, such as encasements, wind turbines and cooling/heating systems. We supply five different AKR-type sound-insulating grilles, each with its own specifications in terms of sound insulation, installation depth and air volume.

## Sound insulation and ventilation

The free air permeance is indicated in the table and diagram (p.t.o.)

H (in mm)	N	% culvert	correction factor
400	1	25,0	2,56
600	2	33,3	1,44
800	3	37,5	1,14
1000	4	40,0	1
1200	5	41,7	0,92
1400	6	42,9	0,87
1600	7	43,8	0,84
1800	8	44,4	0,81
2000	9	45,0	0,79
2200	10	45,5	0,77
2400	11	45,8	0,76
2600	12	46,2	0,75
2800	13	46,4	0,74

(N = number of ventilation slats)

Sound insulation is indicated in the table and diagram. The insulation values were measured in accordance with ISO

140 - 3, Peutz report A993-1. The free air permeance (depending on the height) is 40-45% for all types.

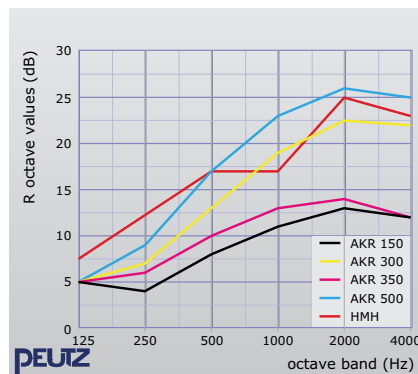
	Grille thickness (mm)	Weight (kg/m <sup>2</sup> )	Sound insulating Rw (dB)
AKR 150	146	41	11
AKR 300	289	61	18
AKR 350	289	60	13
AKR 500	500	83	21
HMH	500	89	20

## Dimensions

- All heights and widths are available.
- Minimum dimensions are (W x H) 200 x 300 mm.
- The grille is fitted with a separator if the height or width exceeds 3000 mm.

The recess is (see drawing p.t.o.):

- W casing (excl. flange) + 20 mm
- H casing (excl. flange) + 20 mm



Sound insulation values

# AKR GRILLES

Acoustic sound-insulating ventilation grilles

## FEATURES

- Rain and snow-proof
- Small installation depth
- Simple installation
- Five types, each with specific features
- Mounting flange or angle profile
- Z-measurement for mounting flange or angle profile

## APPLICATIONS

- Industrial sound sources
- Encasements
- Air-conditioning systems
- Cooling/heating systems
- Parking garages, boiler houses
- Natural and balanced ventilation
- Schools and residential construction



**Sound insulation**  
See chart



**Finishing**

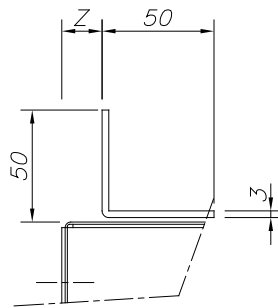
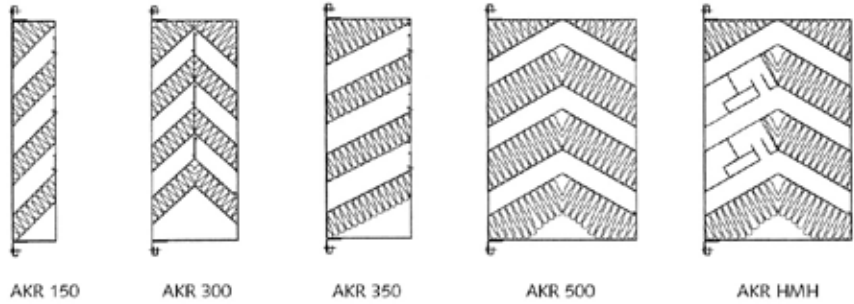
- Coated on the visible side or all around with wet lacquer or powder coating.
- Powder coating:
  - Standard: single-layer, 60 microns thick
  - Alternative: double-layer, min. 120 microns thick
- Wet lacquer:
  - Standard: single-layer 2-component lacquer system, approx. 60 microns
  - Alternative: double-layer lacquer system with epoxy primer and finishing lacquer, 100 microns

**Composition**

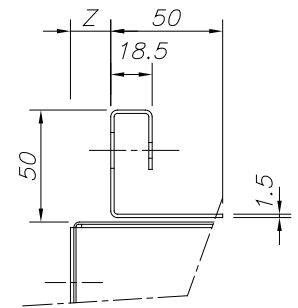
All grilles are constructed of a 1.5 mm thick Sendzimir galvanised casing, with straight or V-shaped slats of 1 mm Sendzimir steel sheeting. The filling of the slats consists of high-quality non-combustible mineral wool, covered with fibreglass membrane and perforated sheeting. The AKR grille comes with a rain shield and an integrated soil-resistant screen, mesh width approx. 18 x 55 mm.

**Options:**

- Mounting flange (see drawing)
  - Flange width 50 mm
  - Contains standard perforation pattern
- Angle profile (see drawing)
  - Flange width 50 mm
  - non-drilled
- The mounting flange or angle profile can be installed at any given Z-measurement (distance from the front of the grill in mm) or can be supplied separately.
- Other materials:
  - Aluminium, quality AlMg 3, seawater corrosion resistant
  - Stainless steel, quality AISI 304, material number 1.4301
  - Stainless steel, quality AISI 316, material number 1.4401

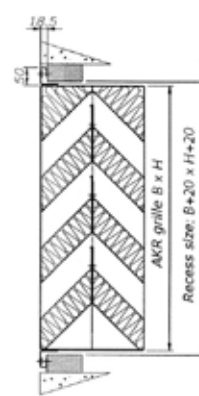


Angle profile



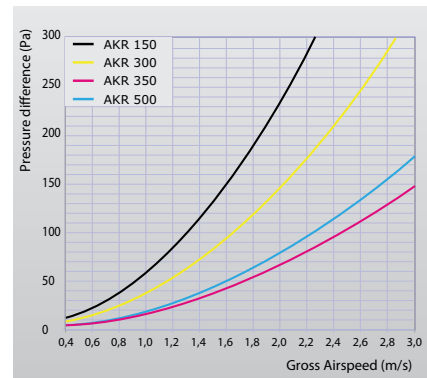
Mounting flange

**Installation dimensions**



**Construction documents and drawings**

The Merford AKR grille is listed in the Stabu and NBD databases. For digital files such as technical specifications or PDF files, please contact Merford.



Pressure difference (Pa), measured according to EN 13030

**Disclaimer**

The recommendations in this product information leaflet have been made as fully and correctly as possible; they are not, however, a guarantee. If in doubt, please consult one of our specialists.