



TYPE AP

RETURN AIR GRILLES, WITH ALUMINIUM BORDER AND FIXED PERFORATED STEEL CORE

Single return air grilles

- Nominal sizes: AP/ RC-AP 150 × 100 – 1200 × 600 mm, APL 595 x 595, 1195 x 1195 mm
- Volume flow rate maximum 1310 l/s or 4716 m³/h
- Grille face made of aluminium with powder-coat finish
- Front border, 30mm wide
- Visible screw fixing as standard

Optional equipment and accessories

- Grille face in RAL CLASSIC colours
- Attachments for opposed blade action volume control
- Screw fix border and border without punching available
- Optional subframe for secret fixing

APPLICATION



Application

- Ventilation grille of Type AP as extract air variant for comfort zones and industrial zones
- Steel perforated core
- For variable and constant volume flows
- For installation in walls, ceilings and rectangular ducts

Special characteristics

- Steel perforated core
- Rectangular front border
- Countersunk holes

Nominal sizes

AP

- Nominal length: 150 mm up to 1200 mm (25 mm increments)
- Nominal height: 100 mm up to 600 mm (25 mm increments)
- Intermediate and larger sizes on request

APL

- Nominal sizes: 595 x 595 to 1195 x 1195 mm
- Intermediate sizes upon request

RC-AP

- Nominal length: 150 mm up to 1200 mm (25 mm increments)
- Nominal height: 100 mm up to 600 mm (25 mm increments)
- Intermediate sizes upon request

DESCRIPTION



Variants

- AP: Single grille
- APL: Lay in ceiling tile replacement
- RC-AP: Single grille with removable core

Front Border

- AP: 30 mm wide
- APL: 17.5mm wide
- RC-AP: 39 mm wide

Fixing:

- 0: Countersunk holes
- X: Without holes (border drilling by customer)
- S11: Concealed fixings (in combination with installation subframe)

Parts and characteristics

- Rectangular profile border sections
- Fixed perforated core
- Factory fitted perimeter seal

Attachments

- AG: for volume flow control
- G4 Filter; FMR-G4-C15 22mm thick chemical fibre medium. Average arrestance according to EN779-90%

Accessories

- Installation subframe. For the fast and simple installation of ventilation grilles

Construction features

- 30 mm wide border
- Fixed fascia perforated core

Materials and surfaces

- Border and core made of aluminium
- P3: Border and blades powder-coated, RAL9010:20%
- P6: Powder-coated RAL CLASSIC colour. Gloss level 30%

Standards and guidelines

- Sound power level of the air-regenerated noise measured according to EN ISO 5135

Maintenance

- Maintenance-free as construction and materials are not subject to wear
- Inspection and cleaning to VDI 6022
- It is recommended to inspect and, if necessary, clean or replace the filter every three months.

TECHNICAL INFORMATION

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



Functional description

Ventilation grilles are air terminal devices for the supply air and extract air of ventilation and air conditioning systems. They direct the supply air into the room. Ventilation grilles with adjustable blades allow for adapting the discharge direction to the local conditions. The result is a mixed flow ventilation in comfort zones and industrial zones, with good overall room ventilation.

Induction slows the airflow down, i.e. the airflow velocity decreases as the distance from the grille increases. The distance at which the airflow velocity reaches a certain defined value, e.g. 0.2 m/s, is called throw distance. The supply air jet from wall grilles that are installed near the ceiling achieves a larger throw distance than a free jet (from a grille that is not installed near the ceiling). Single grilles, groups of grilles and continuous horizontal runs all achieve different throw distances.

In cooling mode it is necessary to take account of the jet deviation towards the occupied zone, which increases as the supply air to room air temperature difference increases and the discharge velocity decreases. In heating mode the supply air jet deviates towards the ceiling. This has no negative effect on the airflow velocity in the occupied zone, but it may affect the complete ventilation of the room.

Nominal sizes	150 × 100 to 1200 × 600 mm
Maximum volume flow rate, with L_{WA} max. 40 dB(A) without attachments	1310 l/s or 4716 m ³ /h

Volume flow rates for single grille for extract air.

Technical data

The tables gives extract air volume flow rates, based on l/s/m for a maximum 5Pa, 10Pa or 15Pa limit.

Maximum sound power level of the air-regenerated noise of 40 dB(A) with an open damper unit (unrestricted airflow)

Extract Air AP/APL

Δpt (Pa)	Extract Air Volume		
	5	10	15
H (mm)	V (l/s/m)		
100	91	127	154
150	170	236	286
200	249	345	418
250	315	436	528
300	403	559	676
350	492	681	818
400	564	781	923
450	674	933	1064
500	732	1014	1123
550	820	1136	1247
600	853	1181	1310

Extract Air RC-AP

Δpt (Pa)	Extract Air Volume		
	5	10	15
H (mm)	V (l/s/m)		
100	91	127	154
150	167	231	280
200	236	327	396
250	302	418	506
300	380	527	638
350	462	640	775
400	540	747	905
450	641	888	1014
500	693	959	1073
550	787	1090	1193
600	814	1127	1251

Ventilation grilles, rectangular, made of aluminium, for supply and extract air.
 Rectangular profile border.
 Preferably for wall and ceiling installation but also suitable for rectangular ducts.
 Ready-to-install component which consists of a border and fixed horizontal blades.
 Countersunk holes for fixing onto an installation surface.
 Sound power level of the air-regenerated noise measured according to EN ISO 5135.

Special characteristics

- Perforated steel core
- Front border
- Countersunk holes

Materials and surfaces

- Border and blades made of aluminium
- P3: Border and blades powder coat RAL9010:20%
- P6: Powder coated RAL CLASSIC colour. Gloss level 30%

Technical data

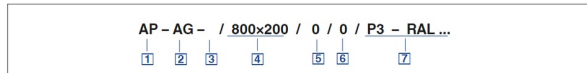
Nominal sizes:
 AP, RC-P 150 x 100 to 1200 x 600 mm
 APL 595 x 595, 1195 x 1195 mm

Maximum volume flow rate (extract air): 1310 l/s or 4716 m³/h at LWA max. 40 dB(A) without attachments:

Sizing data

V _____ [m³/h]
 Δpt _____ [Pa]
 Air-regenerated noise LWA _____ [dB(A)]

AP as a single grille

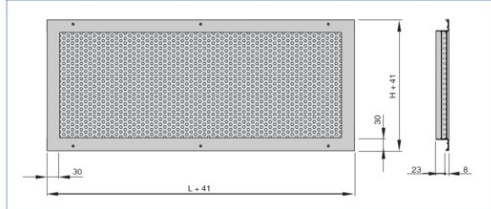


- | | |
|--|---|
| 1 Type | 5 Installation Subframe |
| AP Single grille (30mm border) | 0 Without subframe |
| APL Single grille (17.5mm border) | B30 With 75mm subframe bracket ²⁾ |
| RC-AP Single grille (39mm border) | |
| 2 Attachments | 6 Fixing |
| A Grille face only | 0 Countersunk holes (30mm border) ³⁾ |
| AG Damper unit with opposed action blades ³⁾ | X Without holes |
| | S11 Secret fixing |
| | (In combination with installation subframe) ²⁾ |
| 3 Filter ¹⁾ | 7 Exposed surface |
| 0 Grille face only | P3 RAL 9010:20% |
| G4 Grade G4 filter | P6 Powder-coated RAL CLASSIC colour. |
| | Gloss level: 30% |
| 4 Nominal size [mm] | |
| L x H | |
| AP 150 x 100 to 1200 x 600 | |
| APL 595 x 595, 1195 x 1195 | |
| RC-AP 150 x 100 to 1200 x 600 | |
- * Damper assembly to be specified within plenum box (when supplied)
 1) RC-AP only
 2) AP only
 3) Not with G4 filter

Single grille

AP, 30 mm wide front border

L: Nominal length
 H: Nominal height
 Cut out size:
 Grille fixing ...-0, ...-X
 H / L
 Grille fixing ...-S11
 H + 6 / L + 6



Weights

H	Single Grille
mm	m
	kg/m
100	1.1
150	1.3
200	1.6
250	1.8
300	2.1
350	2.3

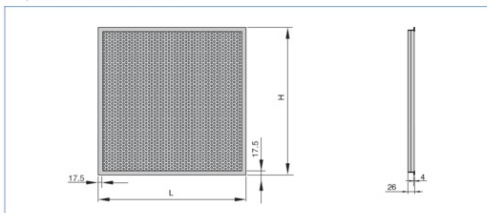
H	Single Grille
mm	m
	kg/m
400	2.5
450	2.8
500	3.0
550	3.3
600	3.5

Weights apply to sections without attachments

Single grille

APL, 17.5 mm wide front border

L: Nominal length
 H: Nominal height
 Cut out size:
 Grille fixing ...-X
 H / L



Weights

H	Single Grille
mm	m
	kg/m
100	0.9
150	1.2
200	1.4
250	1.6
300	1.9
350	2.1

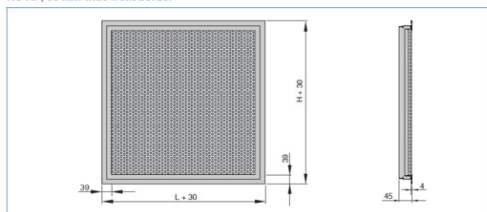
H	Single Grille
mm	m
	kg/m
400	2.3
450	2.6
500	2.8
550	3.0
600	3.3

Weights apply to sections without attachments

Single grille

RC-AP, 39 mm wide front border

L: Nominal length
 H: Nominal height
 Cut out size:
 Grille fixing ...-X
 H / L



Weights

H	Single Grille
mm	m
	kg/m
100	1.7
150	2.0
200	2.3
250	2.5
300	2.8
350	3.1

H	Single Grille
mm	m
	kg/m
400	3.3
450	3.6
500	3.9
550	4.1
600	4.4

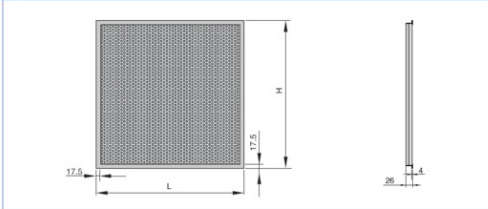
Weights apply to sections without attachments

Single grille

APL, 17.5 mm wide front border

L: Nominal length
H: Nominal height
Cut out size:
Grille fixing ...X

H / L



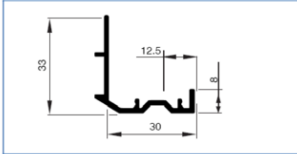
Weights

H	Single Grille	
	mm	kg/m
100	0.9	
150	1.2	
200	1.4	
250	1.6	
300	1.9	
350	2.1	

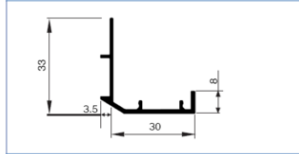
H	Single Grille	
	mm	kg/m
400	2.3	
450	2.6	
500	2.8	
550	3.0	
600	3.3	

Weights apply to sections without attachments

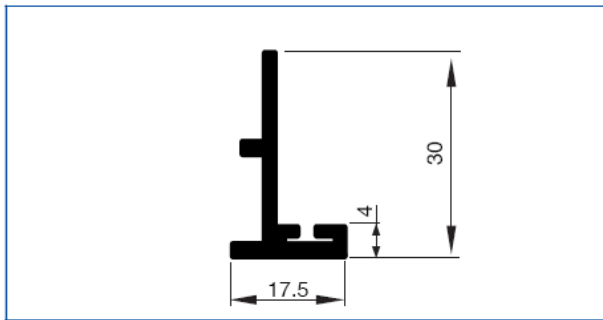
Front border AP...-0



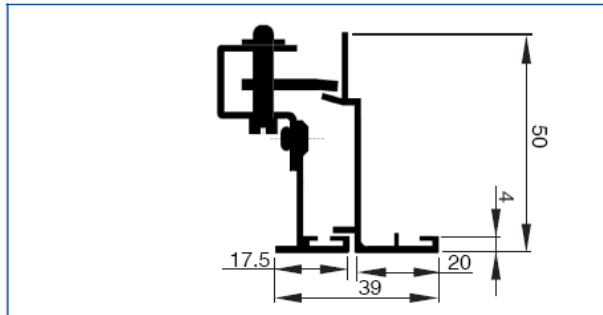
Front border AP...-X



Front border APL...-0



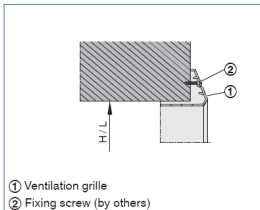
Front border RC-AP...-0



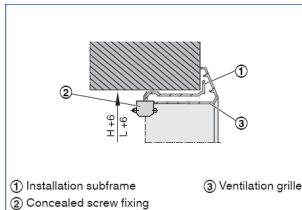
Installation details, Basic information and nomenclature



Ventilation grille with screw fixing



Ventilation grille with concealed screw fixing



Principal dimensions

L [mm]

Nominal length of the ventilation grille

H [mm]

Nominal height of the ventilation grille

m [kg]

Weight

Nomenclature

LWA [dB(A)]

Sound power level of the air-regenerated noise

V [m³/h] and [l/s]

Volume flow rate

Δp_t [Pa]

Total differential pressure