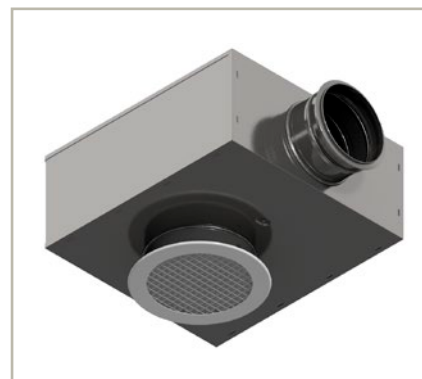
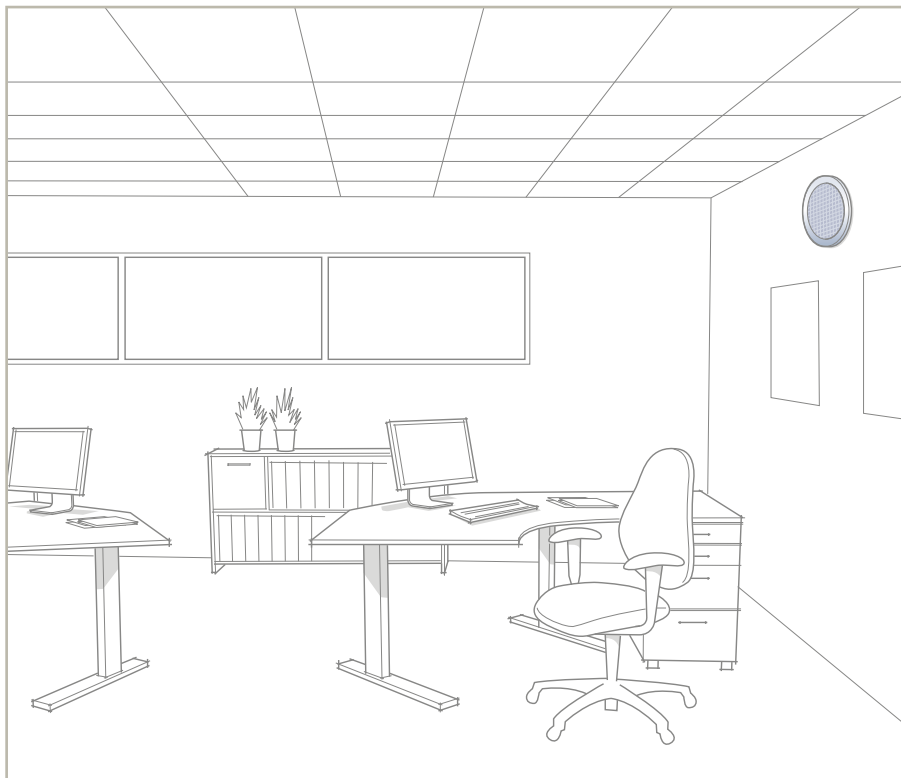


# Circular egg-crate extract air grille **PSEG**

TECHNICAL DATA





PSEG is an egg-crate extract air grille recommended to be used in commercial application buildings such as offices, conference rooms, shops, etc.

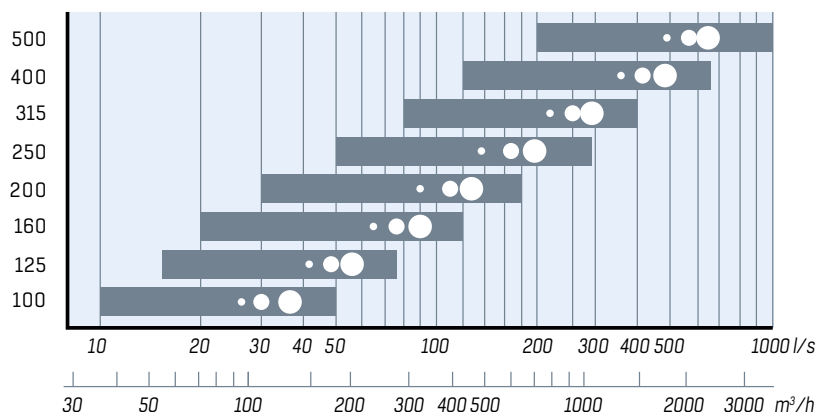
The grille is suitable for both ceiling and wall installation. It can be installed stand alone in the ventilation duct via pushed-in connection or together with ATTD plenum box.

High percentage of grille free area ensures very low sound level. PSEG is painted in RAL 9003 colour.

## QUICK SELECTION

### PSEG circular egg-crate extract grille airflow range

Duct connection diameter (mm)



The grey bar shows the airflow range.

The size of the circle shows at which airflow rate the sound pressure level is:

● 25 dB(A) ● 30 dB(A) ● 35 dB(A).

## SPECIFICATIONS

- 8 grille sizes from 100 to 500 mm
- Suitable for an air extract
- Available with the ATTD plenum box
- Wide airflow range
- Low sound level
- Grille available in RAL 9003 finish.

## PRODUCT CODE EXAMPLE

### Circular extract air grille PSEG-20-1

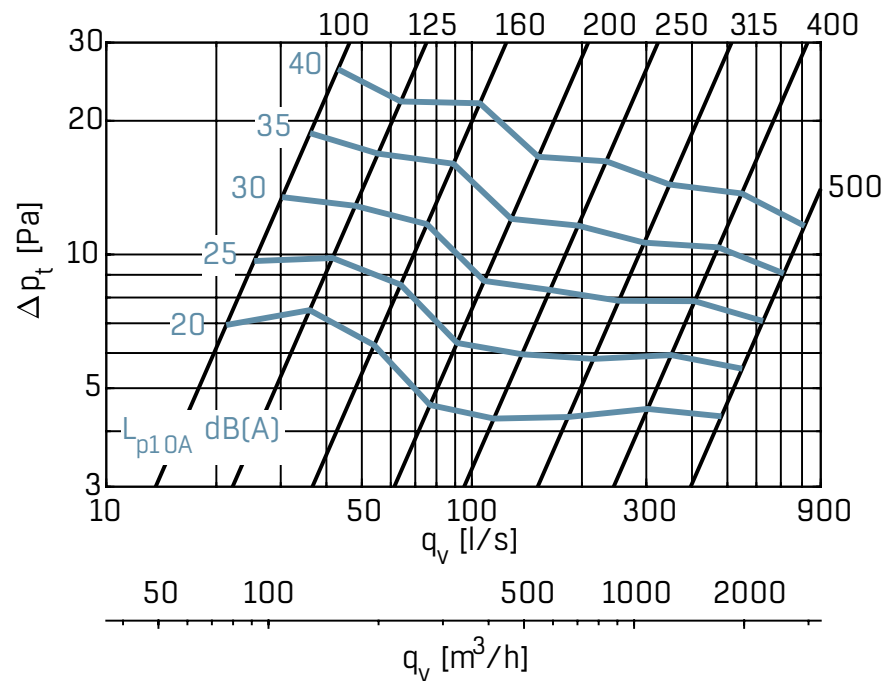
Grille connection diameter 200 mm, painted in RAL 9003 colour.

### Plenum box ATTD-160-200-1

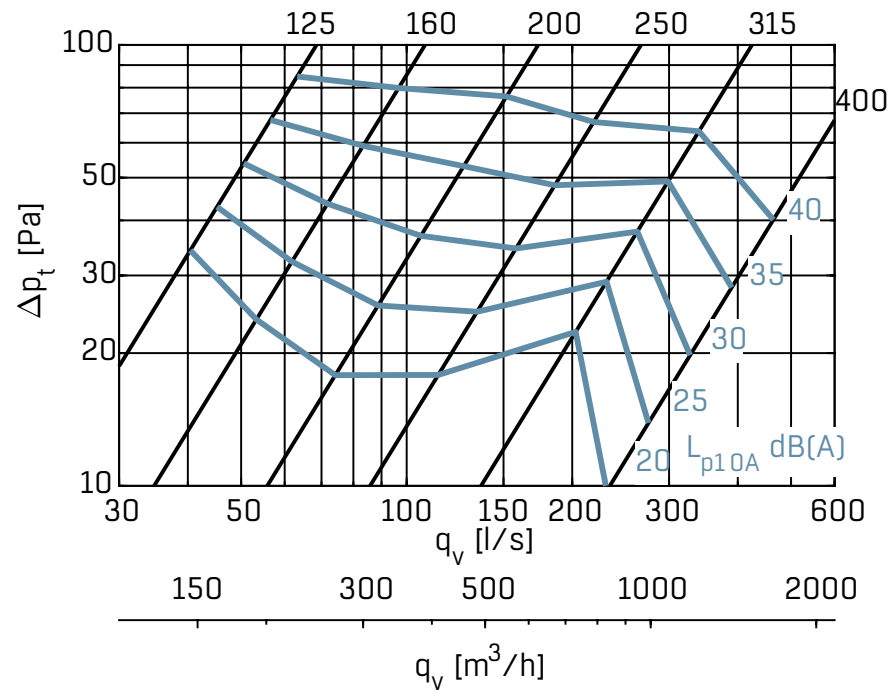
Grille connection diameter 200 mm, duct connection diameter 160 mm, collar outwards.

AIR FLOW, PRESSURE DROP, SOUND LEVEL

PSEG EGG-CRATE EXTRACT GRILLE - DUCT MOUNTED



PSEG EGG-CRATE EXTRACT GRILLE WITH ATTD PLENUM BOX (WITHOUT DAMPER)

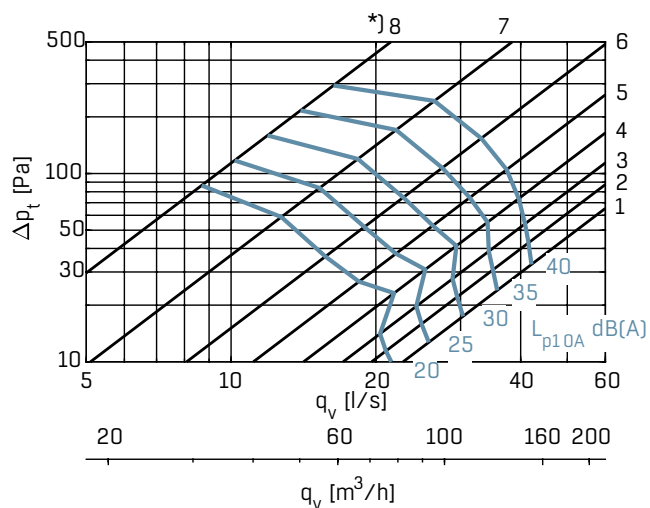


In the above graph the sound pressure levels are indicated in dB(A) for a reference room with 10 m² Sabine room absorption, equivalent to 4 dB room attenuation.

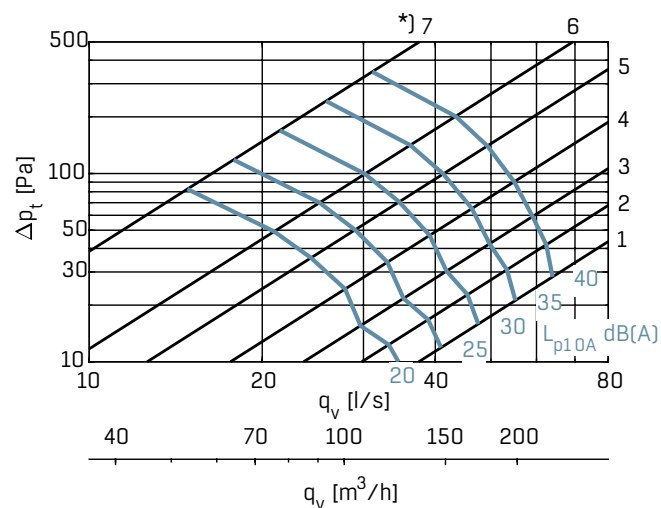
## AIR FLOW, PRESSURE DROP, SOUND LEVEL

### PSEG EGG-CRATE EXTRACT GRILLE (DUCT MOUNTED) + IRIS REGULATION AND MEASURING DAMPER

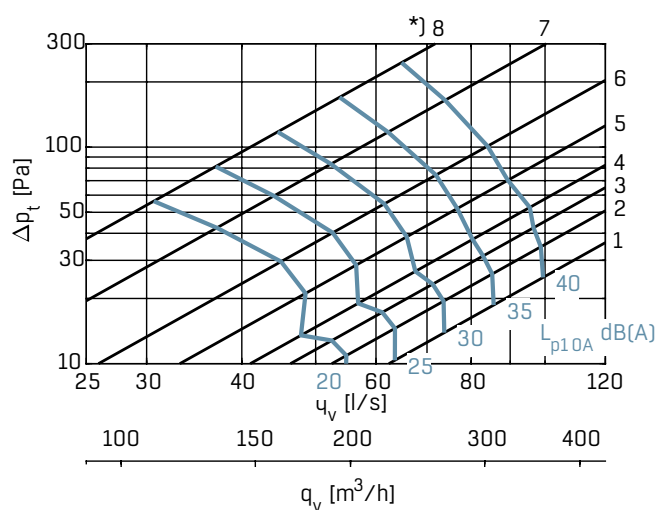
#### PSEG-10-1 + IRIS-100



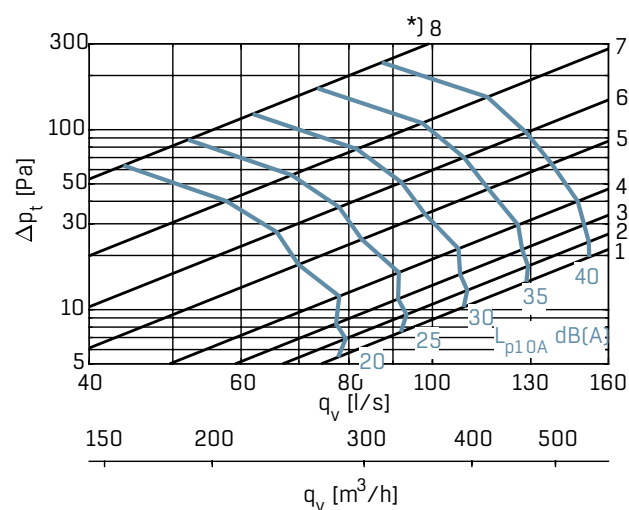
#### PSEG-12-1 + IRIS-125



#### PSEG-16-1 + IRIS-160



#### PSEG-20-1 + IRIS-200



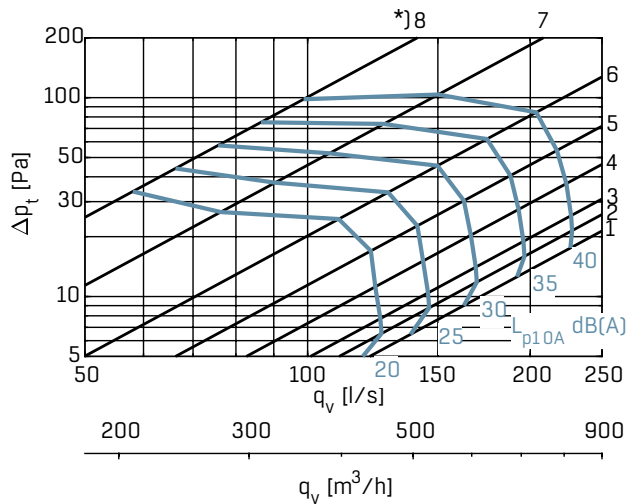
In the above graphs the sound pressure levels are indicated in dB(A) for a reference room with 10 m² Sabine room absorption, equivalent to 4 dB room attenuation.

\*) IRIS damper adjustment position. Note: Damper is not an integrated part of the plenum box.

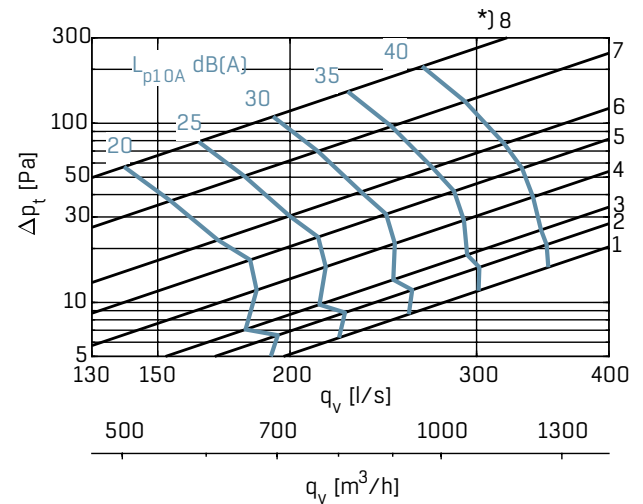
## AIR FLOW, PRESSURE DROP, SOUND LEVEL

### PSEG EGG-CRATE EXTRACT GRILLE (DUCT MOUNTED) + IRIS REGULATION AND MEASURING DAMPER

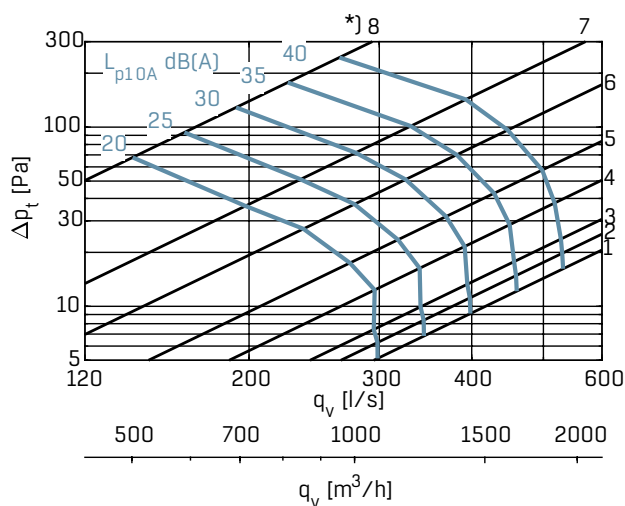
#### PSEG-25-1 + IRIS-250



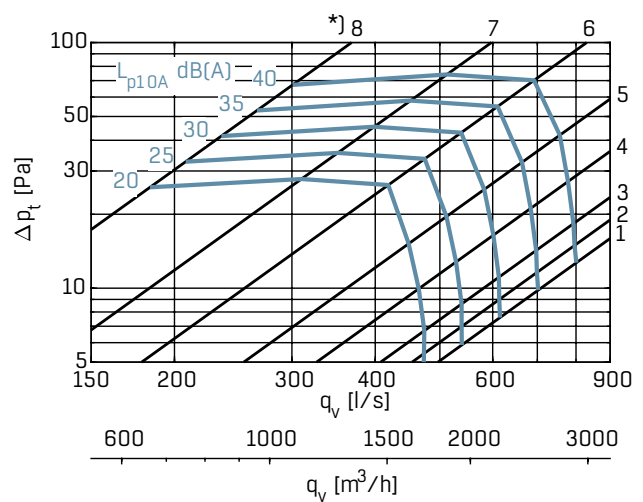
#### PSEG-31-1 + IRIS-315



#### PSEG-40-1 + IRIS-400



#### PSEG-50-1 + IRIS-500



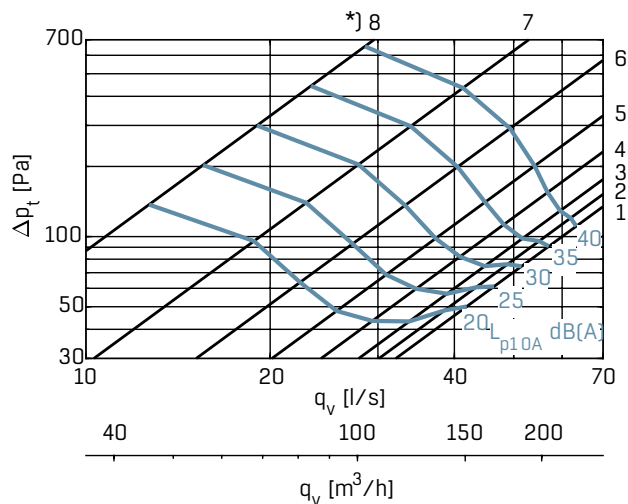
In the above graphs the sound pressure levels are indicated in dB(A) for a reference room with 10 m² Sabine room absorption, equivalent to 4 dB room attenuation.

$*)$  IRIS damper adjustment position. Note: Damper is installed at the connecting duct.

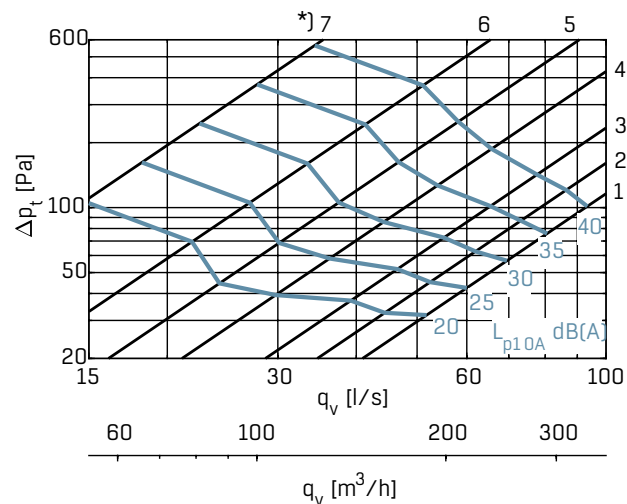
## AIR FLOW, PRESSURE DROP, SOUND LEVEL

### PSEG EGG-CRATE EXTRACT GRILLE + ATTD PLENUM BOX + IRIS REGULATION AND MEASURING DAMPER

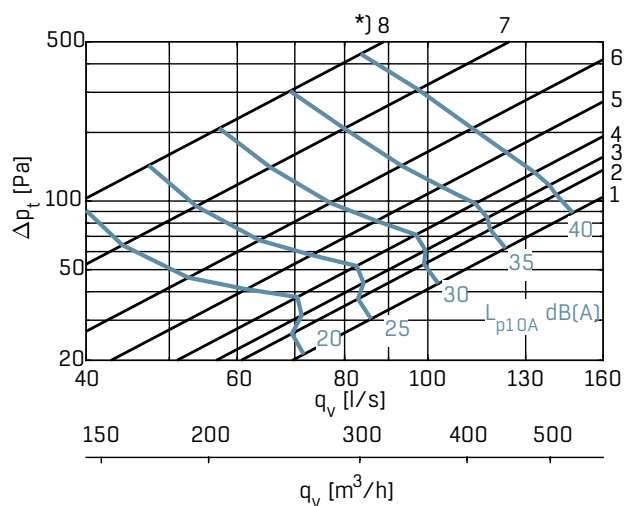
**PSEG-12-1 + ATTD-100-125-1 + IRIS-100**



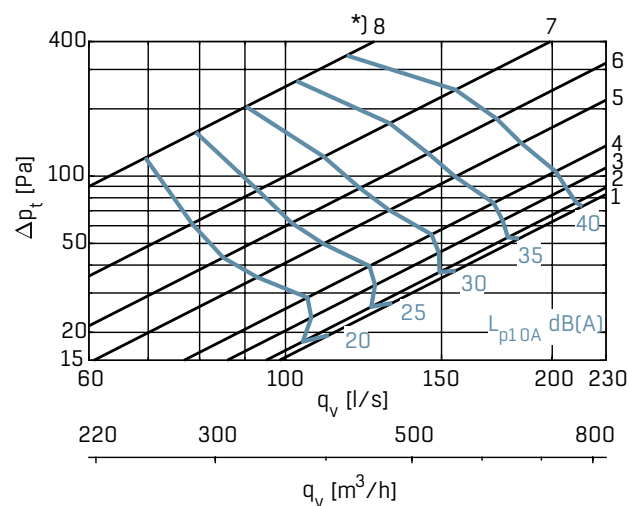
**PSEG-16-1 + ATTD-125-160-1 + IRIS-125**



**PSEG-20-1 + ATTD-160-200-1 + IRIS-160**



**PSEG-25-1 + ATTD-200-250-1 + IRIS-200**



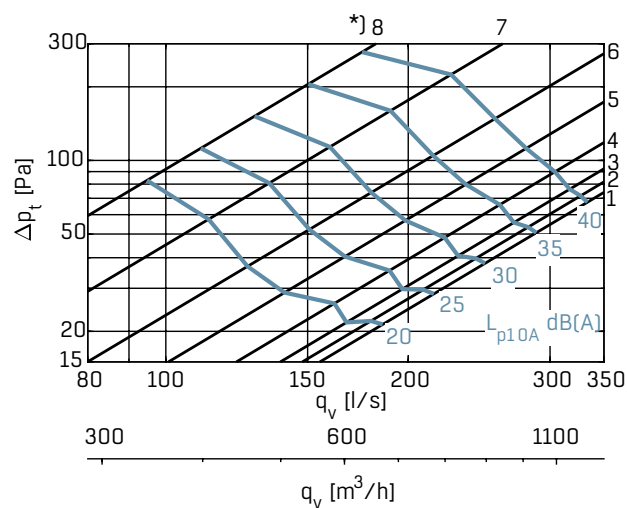
In the above graphs the sound pressure levels are indicated in dB(A) for a reference room with 10 m<sup>2</sup> Sabine room absorption, equivalent to 4 dB room attenuation.

**\***) IRIS damper adjustment position. Note: Damper is not an integrated part of the plenum box.

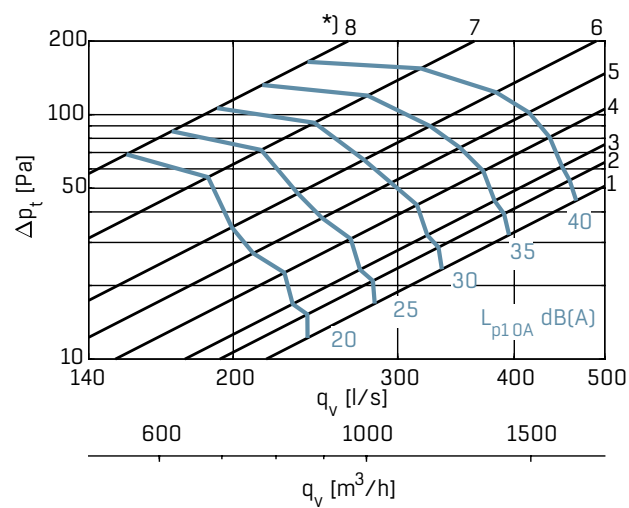
## AIR FLOW, PRESSURE DROP, SOUND LEVEL

### PSEG EGG-CRATE EXTRACT GRILLE + ATTD PLENUM BOX + IRIS REGULATION AND MEASURING DAMPER

#### PSEG-31-1 + ATTD-250-315-1 + IRIS-250



#### PSEG-40-1 + ATTD-315-400-1 + IRIS-315



In the above graphs the sound pressure levels are indicated in dB(A) for a reference room with 10 m² Sabine room absorption, equivalent to 4 dB room attenuation.

\*J) IRIS damper adjustment position. Note: Damper is not an integrated part of the plenum box.

## SOUND DATA, DEFINITIONS

### SOUND POWER LEVEL $L_w$

#### PSEG extract air grille (duct mounted)

| Size            | Correction of sound level $K_{oct}$ in dB for octave bands, mean frequency (Hz) |     |     |     |      |      |      |      |
|-----------------|---------------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|
|                 | 63                                                                              | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| PSEG-10         | -6                                                                              | -9  | -6  | -2  | -3   | 0    | -7   | -19  |
| PSEG-12         | -2                                                                              | -8  | -6  | -2  | -4   | 1    | -8   | -20  |
| PSEG-16         | -3                                                                              | -11 | -7  | -4  | -3   | 0    | -5   | -19  |
| PSEG-20         | -7                                                                              | -14 | -10 | -7  | -1   | 1    | -11  | -22  |
| PSEG-25         | -7                                                                              | -10 | -7  | -6  | 0    | 0    | -12  | -22  |
| PSEG-31         | -1                                                                              | -7  | -4  | -4  | 0    | 0    | -13  | -23  |
| PSEG-40         | 1                                                                               | -7  | -4  | -3  | 0    | -1   | -14  | -23  |
| PSEG-50         | -6                                                                              | -4  | -1  | 0   | 1    | -4   | -16  | -14  |
| Tolerance $\pm$ | 6                                                                               | 3   | 2   | 2   | 2    | 2    | 2    | 3    |

#### PSEG extract air grille + ATTD plenum box

| Size            | Correction of sound level $K_{oct}$ in dB for octave bands, mean frequency (Hz) |     |     |     |      |      |      |      |
|-----------------|---------------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|
|                 | 63                                                                              | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100-125         | 2                                                                               | -2  | -3  | -4  | 0    | -1   | -12  | -23  |
| 125-160         | 0                                                                               | 2   | 2   | -5  | -3   | 0    | -10  | -22  |
| 160-200         | 3                                                                               | 5   | -2  | -3  | -1   | 0    | -11  | -21  |
| 200-250         | 2                                                                               | 6   | -1  | -4  | 0    | -1   | -14  | -23  |
| 250-315         | 8                                                                               | 7   | -1  | -2  | 0    | -2   | -14  | -22  |
| 315-400         | 9                                                                               | 6   | -1  | -2  | -2   | -2   | -4   | -19  |
| Tolerance $\pm$ | 6                                                                               | 3   | 2   | 2   | 2    | 2    | 2    | 3    |

#### PSEG extract air grille + IRIS regulation damper

| Size            | Correction of sound level $K_{oct}$ in dB for octave bands, mean frequency (Hz) |     |     |     |      |      |      |      |
|-----------------|---------------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|
|                 | 63                                                                              | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| PSEG-10         | 1                                                                               | -3  | 0   | 1   | -1   | -2   | -11  | -21  |
| PSEG-12         | 0                                                                               | -1  | 1   | 1   | -2   | -1   | -11  | -21  |
| PSEG-16         | 4                                                                               | 0   | 1   | 0   | -1   | -2   | -15  | -19  |
| PSEG-20         | -2                                                                              | -3  | -2  | -1  | 0    | -1   | -11  | -20  |
| PSEG-25         | -3                                                                              | -3  | -2  | -2  | 0    | -1   | -13  | -22  |
| PSEG-31         | 1                                                                               | 1   | 1   | -1  | -1   | -1   | -13  | -22  |
| PSEG-40         | 2                                                                               | 0   | 1   | -1  | -1   | -1   | -10  | -18  |
| PSEG-50         | 0                                                                               | -1  | 1   | 0   | 0    | -3   | -13  | -14  |
| Tolerance $\pm$ | 6                                                                               | 3   | 2   | 2   | 2    | 2    | 2    | 3    |

#### PSEG extract air grille + ATTD plenum box + IRIS regulation damper

| Size            | Correction of sound level $K_{oct}$ in dB for octave bands, mean frequency (Hz) |     |     |     |      |      |      |      |
|-----------------|---------------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|
|                 | 63                                                                              | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100-125         | 2                                                                               | 5   | 5   | -1  | -2   | -2   | -8   | -19  |
| 125-160         | 1                                                                               | 9   | 8   | -2  | -3   | -5   | -11  | -21  |
| 160-200         | 5                                                                               | 11  | 6   | -1  | -3   | -3   | -11  | -21  |
| 200-250         | 6                                                                               | 10  | 3   | -1  | -1   | -2   | -11  | -19  |
| 250-315         | 12                                                                              | 11  | 3   | -2  | -1   | -3   | -12  | -21  |
| 315-400         | 8                                                                               | 9   | 2   | -2  | -1   | -2   | -6   | -19  |
| Tolerance $\pm$ | 6                                                                               | 3   | 2   | 2   | 2    | 2    | 2    | 3    |

Sound power levels by octave bands are obtained by adding to total sound pressure level  $L_{p10A}$ , dB(A), the correction  $K_{oct}$  presented in the table according to the following formula:

$$L_w = L_{p10A} + K_{oct}$$

Correction  $K_{oct}$  is average value in range of use of the device.

### SOUND ATTENUATION $\Delta L$

#### PSEG extract air grille (duct mounted)

| Size            | Sound attenuation $\Delta L$ in dB for octave bands, mean frequency (Hz) |     |     |     |      |      |      |      |
|-----------------|--------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|
|                 | 63                                                                       | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| PSEG-10         | 24                                                                       | 17  | 11  | 7   | 3    | 1    | 1    | 2    |
| PSEG-12         | 22                                                                       | 15  | 9   | 5   | 2    | 1    | 1    | 2    |
| PSEG-16         | 18                                                                       | 12  | 7   | 4   | 1    | 1    | 0    | 1    |
| PSEG-20         | 17                                                                       | 10  | 6   | 3   | 1    | 0    | 1    | 2    |
| PSEG-25         | 14                                                                       | 8   | 4   | 1   | 1    | 0    | 0    | 2    |
| PSEG-31         | 12                                                                       | 7   | 4   | 1   | 1    | 0    | 0    | 2    |
| PSEG-40         | 10                                                                       | 5   | 3   | 1   | 1    | 1    | 1    | 2    |
| PSEG-50         | 11                                                                       | 6   | 2   | 1   | 0    | 0    | 0    | 0    |
| Tolerance $\pm$ | 6                                                                        | 3   | 2   | 2   | 2    | 2    | 2    | 3    |

#### PSEG extract air grille + ATTD plenum box

| Size            | Sound attenuation $\Delta L$ in dB for octave bands, mean frequency (Hz) |     |     |     |      |      |      |      |
|-----------------|--------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|
|                 | 63                                                                       | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100-125         | 21                                                                       | 20  | 15  | 21  | 18   | 14   | 12   | 13   |
| 125-160         | 25                                                                       | 15  | 11  | 15  | 12   | 14   | 12   | 15   |
| 160-200         | 19                                                                       | 13  | 12  | 15  | 14   | 9    | 10   | 13   |
| 200-250         | 16                                                                       | 10  | 11  | 9   | 12   | 10   | 11   | 13   |
| 250-315         | 10                                                                       | 6   | 9   | 12  | 11   | 9    | 10   | 13   |
| 315-400         | 9                                                                        | 7   | 8   | 9   | 9    | 10   | 9    | 10   |
| Tolerance $\pm$ | 6                                                                        | 3   | 2   | 2   | 2    | 2    | 2    | 3    |

The average sound attenuation  $\Delta L$  from duct to room including the end reflection of the connecting duct in ceiling installation, is obtained in the table above.

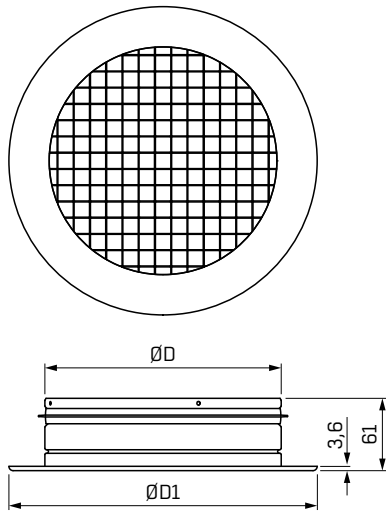
### DEFINITIONS

|              |                                                                                               |              |
|--------------|-----------------------------------------------------------------------------------------------|--------------|
| $q$          | air flow                                                                                      | $l/s, m^3/h$ |
| $\Delta p_t$ | total pressure drop                                                                           | Pa           |
| $L_{u2}$     | throw                                                                                         | m            |
| $L_{p10A}$   | sound pressure level with a room attenuation of 4 dB (10 m <sup>2</sup> room absorption area) | dB(A)        |
| $L_w$        | sound power level                                                                             | dB           |
| $K_{oct}$    | octave band correction                                                                        | dB           |
| $\Delta L$   | sound attenuation from the duct to the room                                                   | dB           |



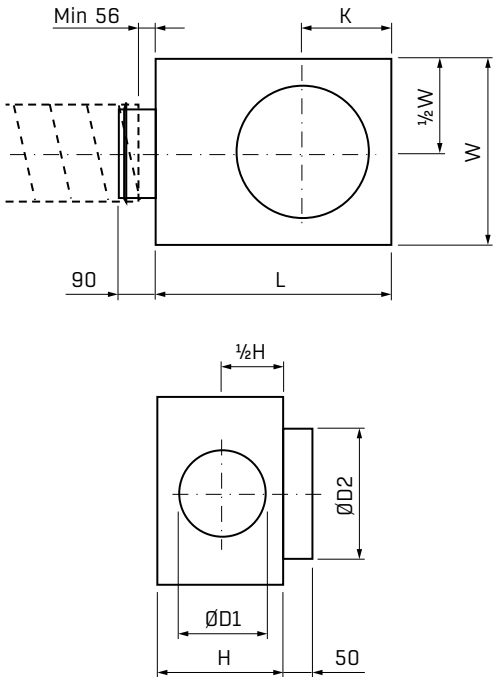
DIMENSIONS AND WEIGHT

PSEG CIRCULAR EGG-CRATE EXTRACT AIR GRILLE



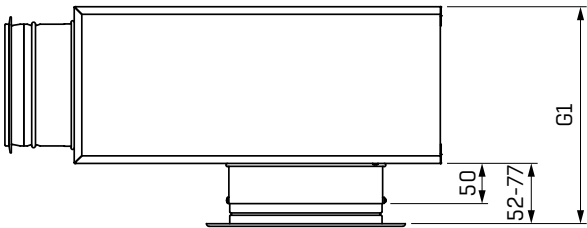
| Model   | ØD<br>(mm) | ØD1<br>(mm) | Weight<br>(kg) |
|---------|------------|-------------|----------------|
| PSEG-10 | 99         | 160         | 0.3            |
| PSEG-12 | 124        | 185         | 0.4            |
| PSEG-16 | 159        | 220         | 0.6            |
| PSEG-20 | 199        | 260         | 0.8            |
| PSEG-25 | 249        | 310         | 1.1            |
| PSEG-31 | 314        | 375         | 1.5            |
| PSEG-40 | 399        | 480         | 2.3            |
| PSEG-50 | 499        | 560         | 3.1            |

ATTD PLENUM BOX



| Size    | ØD1<br>(mm) | ØD2<br>(mm) | H<br>(mm) | L<br>(mm) | W<br>(mm) | K<br>(mm) | Weight<br>(kg) |
|---------|-------------|-------------|-----------|-----------|-----------|-----------|----------------|
| 100-125 | 99.3        | 125         | 170       | 350       | 320       | 132       | 2.5            |
| 125-160 | 124.3       | 160         | 170       | 450       | 320       | 152       | 3.0            |
| 160-200 | 159.3       | 200         | 205       | 480       | 440       | 177       | 4.0            |
| 200-250 | 199.3       | 250         | 245       | 630       | 480       | 210       | 5.5            |
| 250-315 | 249.3       | 315         | 295       | 680       | 570       | 252       | 6.9            |
| 315-400 | 314.3       | 400         | 360       | 680       | 570       | 252       | 8.0            |

PSEG CIRCULAR EGG-CRATE EXTRACT AIR GRILLE + ATTD PLENUM BOX



| Grille  | Plenum box     | G1min<br>(mm) | G1max<br>(mm) |
|---------|----------------|---------------|---------------|
| PSEG-12 | ATTD-100-125-5 | 222           | 247           |
| PSEG-16 | ATTD-125-160-5 | 222           | 247           |
| PSEG-20 | ATTD-160-200-5 | 257           | 282           |
| PSEG-25 | ATTD-200-250-5 | 297           | 322           |
| PSEG-31 | ATTD-250-315-5 | 347           | 372           |
| PSEG-40 | ATTD-315-400-5 | 412           | 437           |

## GENERAL, PRODUCT CODE AND ACCESSORIES

### CONSTRUCTION AND FUNCTION

The PSEG is a quiet, ceiling or wall mounted egg-crate extract grille. It can be installed stand alone in the ventilation duct via pushed-in connection or together with ATTD plenum box (except size 50).

### MATERIAL AND SURFACE FINISH

The extract grille is made of galvanised steel and it is painted in RAL 9003 colour, 70% gloss level. It has a free area of 90%.

The plenum box ATTD is made of galvanised steel sheet. The sound attenuation lining is made of polyester fibre.

### INSTALLATION, ADJUSTMENT AND MAINTENANCE

The instructions for installation, adjustment and maintenance are available at [www.flaktgroup.com](http://www.flaktgroup.com).

### TECHNICAL DATA AND DIMENSIONING

For complete design details, please see the FläktGroup product selection program SELECT. The program can be found on the Internet at [www.flaktgroup.com](http://www.flaktgroup.com).

### SPECIFICATION TEXT EXAMPLE

The PSEG is a quiet, egg-crate extract air grille available in 8 sizes. The grille is suitable for both ceiling and wall installation. High percentage of grille free area ensures very low sound level. The PSEG is painted in RAL 9003 colour.

### PRODUCT CODE

**Circular egg-crate extract air grille**

**PSEG-aa-b**

**Grille size, cm (aa)**

10, 12, 16, 20, 25, 31, 40, 50

**Colour RAL (b)**

1 = standard RAL 9003

X = any other colour from RAL palette

**Plenum box**

**ATTD-aaa-bbb-c**

**Size (aaa-bbb)**

100-125, 125-160, 160-200,

200-250, 250-315, 315-400

(duct connection size - grille size)

**Type (c)**

1 = collar outwards

5 = without damper

### ACCESSORIES

**Regulation and measuring device**

**IRIS-aaa**

**Diameter in mm (aaa)**

100, 125, 160, 200, 250, 315, 400, 500





FläktGroup is the European market leader for smart and energy efficient Indoor Air and Critical Air solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance supported by more than a century of accumulated industry experience. The widest product range in the market, and strong market presence in 65 countries worldwide, guarantee that we are always by your side.

#### **PRODUCT FUNCTIONS BY FLÄKTGROUP**

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Air Distribution | Air Filtration | Air Management & ATD's  
Air Conditioning & Heating | Controls | Service



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