

## Description and application

Grilles intake and exhaust have one row of movable blades embedded in the front frame in a horizontal system and damper directly behind the grille louver. For use in installation low and medium pressure. Adjusting the angle is manual and the individual for each blade.

Grille has Hygienic Certificate HK/K/0522/01/2016

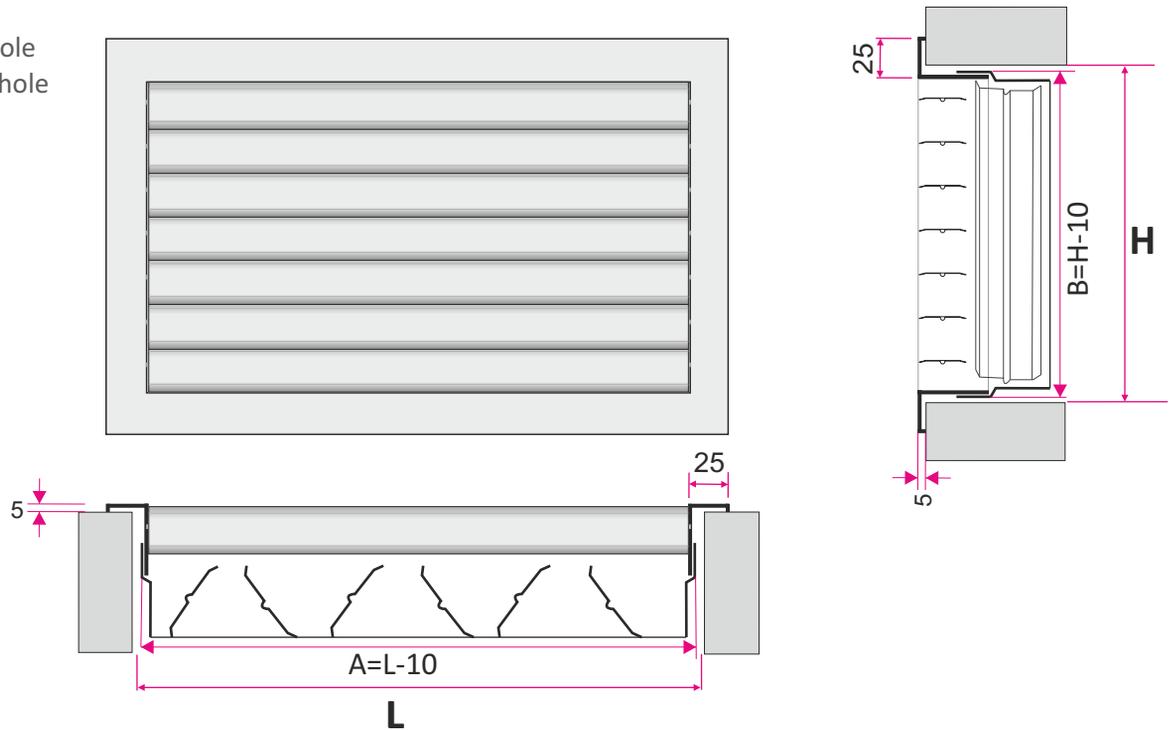
## Material and workmanship

The grille is made of galvanized steel sheet powder coated white RAL 9016. On request it is possible to paint in a different color from the RAL palette and made on special stainless steel or aluminum. The damper is made of galvanized steel (on request can also be painted in any RAL color).

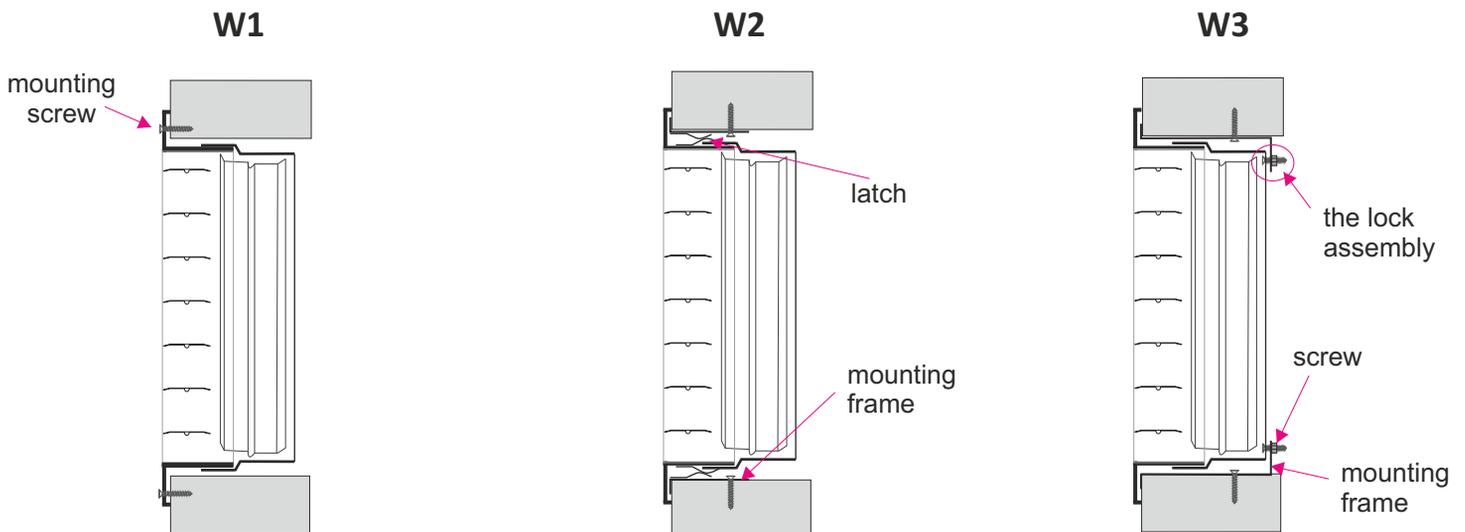
## Size

Grilles are manufactured to order. Grilles dimension by the customer request. For  $H < 125\text{mm}$  the grille is equipped with a slot damper GS.

**L** - width of the mounting hole  
**H** - height of the mounting hole



## Methods of mounting



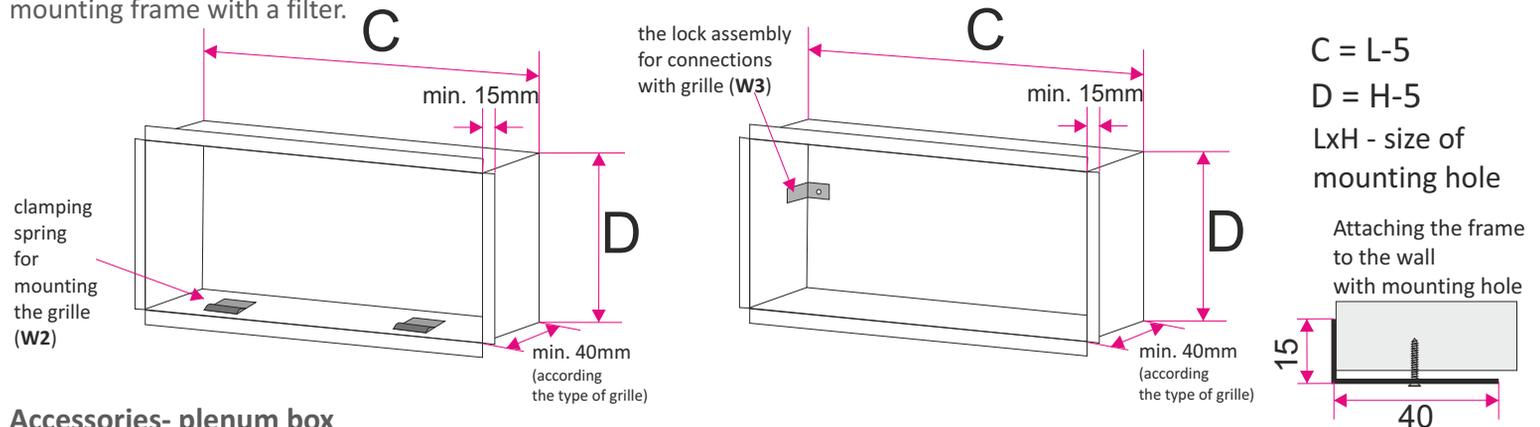
Assembling visible through screws and mounting holes in the grille frame.

Assembling invisible by latches in grille and mounting frame RM or in plenum box.

Assembling invisible by screws and lock assembly in mounting frame RM or in plenum box.

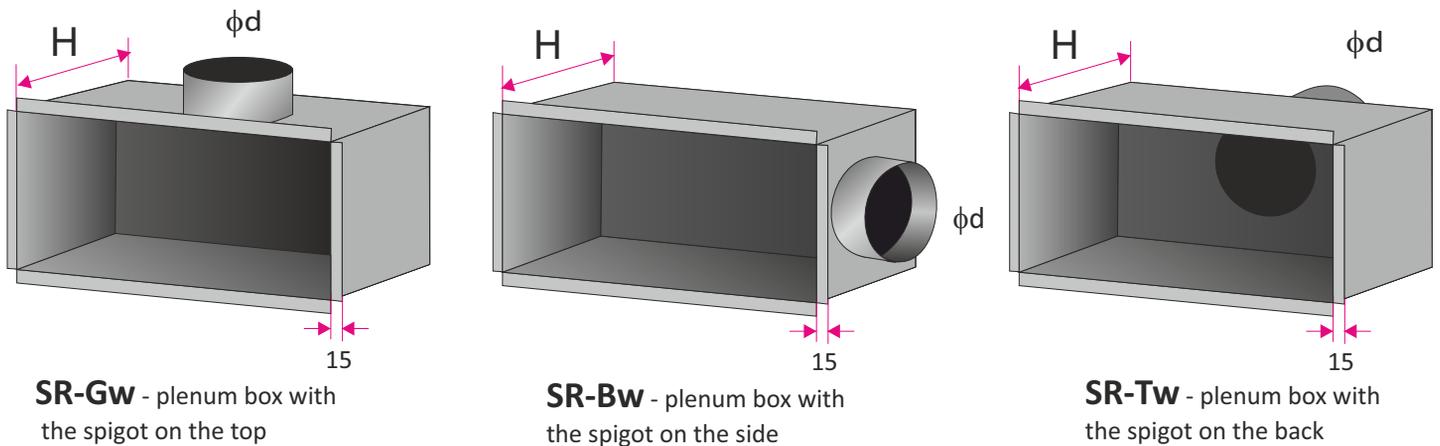
## Accessories - RM frame for invisible installation

RM frame used in the ventilation holes for invisible mounting ventilation components. Mounting frame for grilles in standard are made of galvanized steel (in the case of aluminum grilles on request frame can be also aluminum). There is possibility to make mounting frame with a filter.



## Accessories- plenum box

Plenum box is made of galvanized steel. On request it can be equipped with a damper control onto the connected spigot. The plenum box is isolated inside with rubber (acoustic) or outside with mineral wool (thermal). In the standard height of the plenum box is adapted to size of the spigot or diffuser size (you can specify the height of the plenum box).



**SR-Gw** - plenum box with the spigot on the top

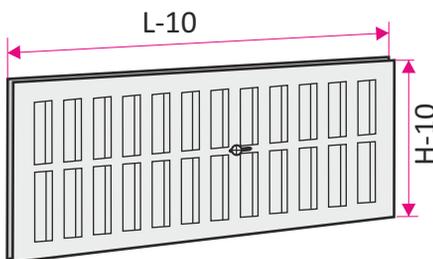
**SR-Bw** - plenum box with the spigot on the side

**SR-Tw** - plenum box with the spigot on the back

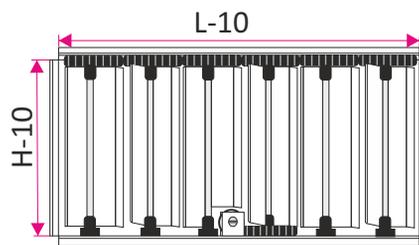
## Accessories- dampers

Grille ST-W/GP can also be equipped with a damper, positioned directly behind the grille blades. In this type of grille, damper regulation is possible from the front side of grille, without the need for disassembly, by deviation grille blades.

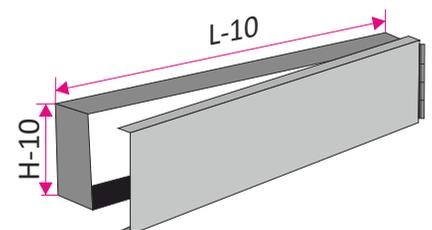
Below there are the types of dampers used for the ventilation grilles.



**GS** - slot damper  
(above the size of 525x425 the damper must be divided)



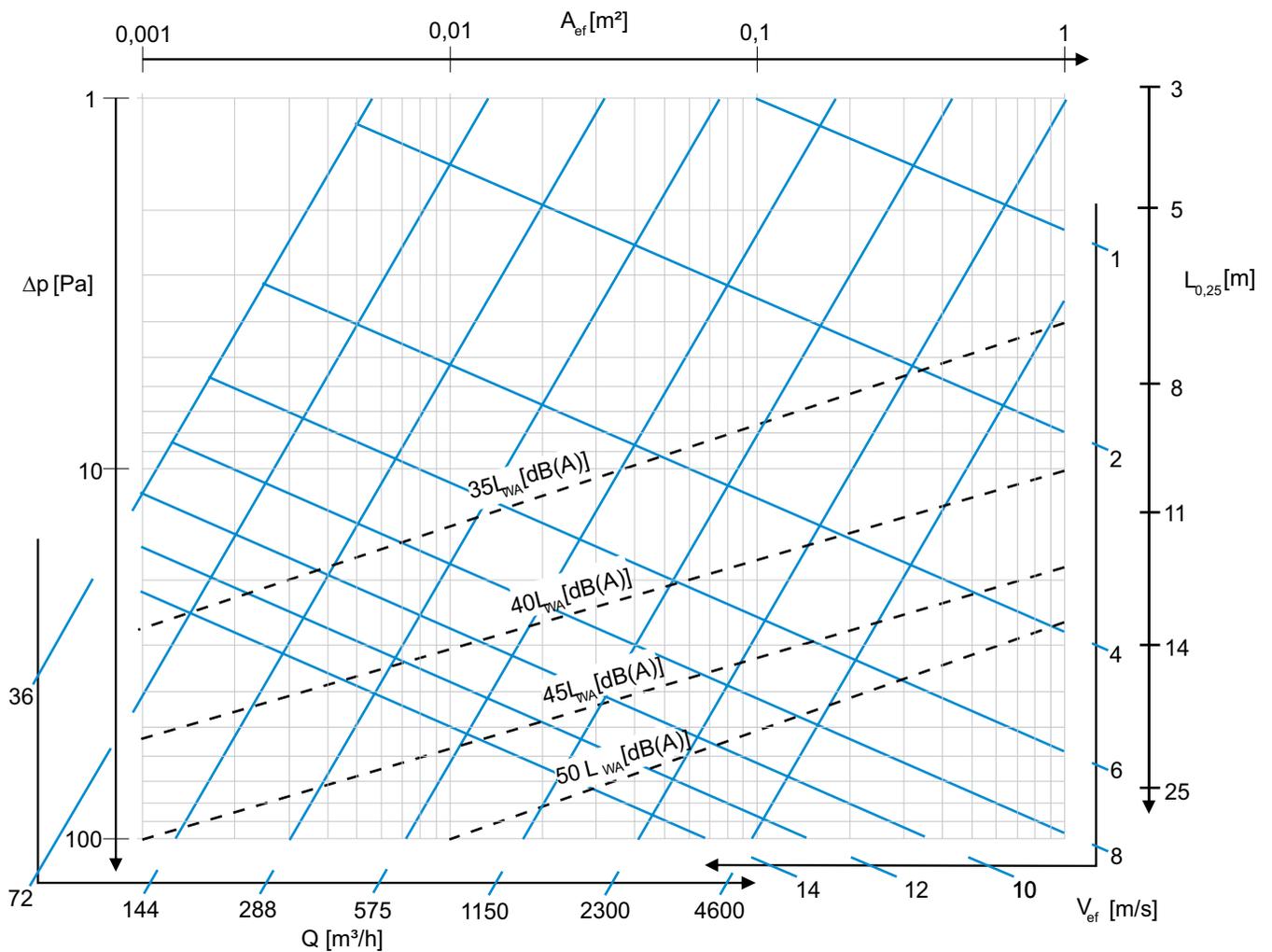
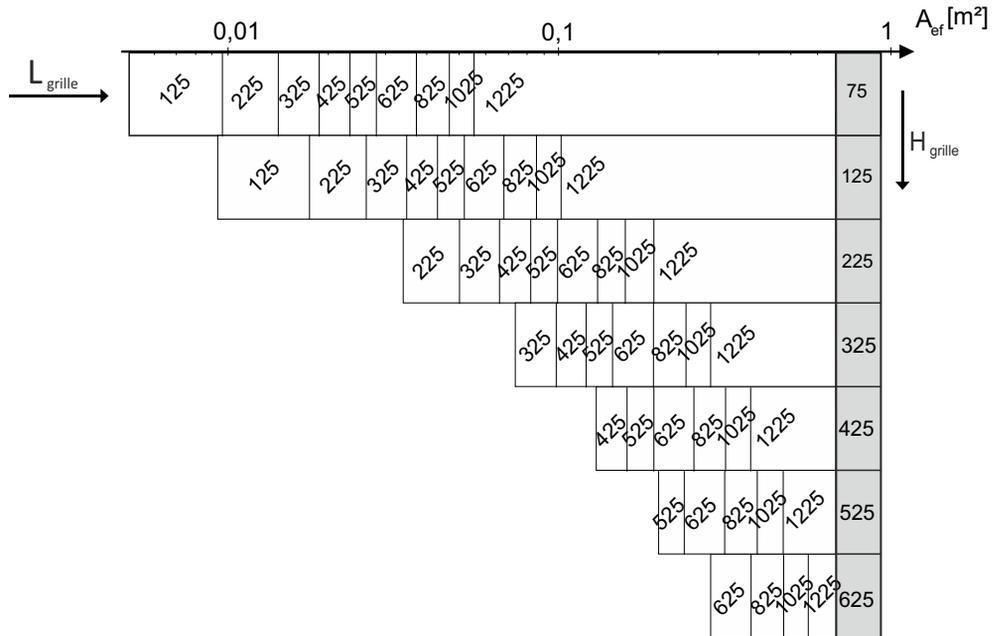
**GP** - damper with counter running blades  
(above the size of 525x425 the damper must be divided)



**GU** - cantilevered damper  
(especially recommended for grilles to spiro channel)

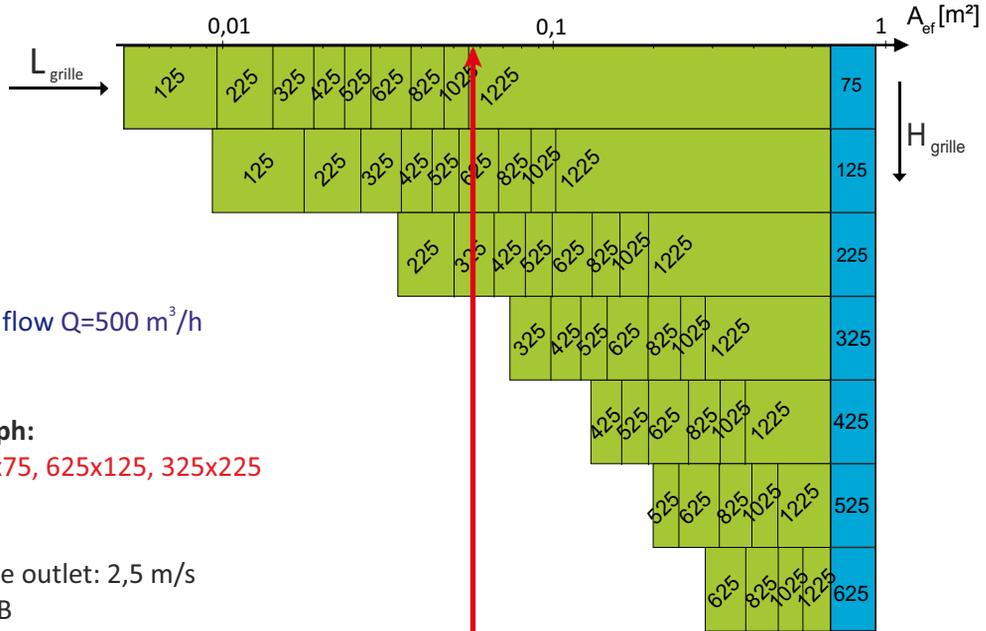
### TECHNICAL DATA

The dependence of pressure drop ( $\Delta p$ ), maximum speed of air stream ( $V_{ef}$ ), acoustic power level ( $L_{WA}$ ) and the range air stream of speed  $V=0,25$  m/s ( $L_{0,25}$ ) of air volume flow ( $Q$ ) with grilles at open dampers. Velocity  $V_{ef}$  means maximum speed of air outflow measured at the outlet the grille. Range  $L_{0,25}$  refers to the distance at which the air speed does not exceed 0,25 m/s.



H [mm]	L [mm]	125	225	325	425	525	625	825	1025	1225
75	125									
125	125									
225	125									
325	125									
425	125									
525	125									
625	125									

 normal size

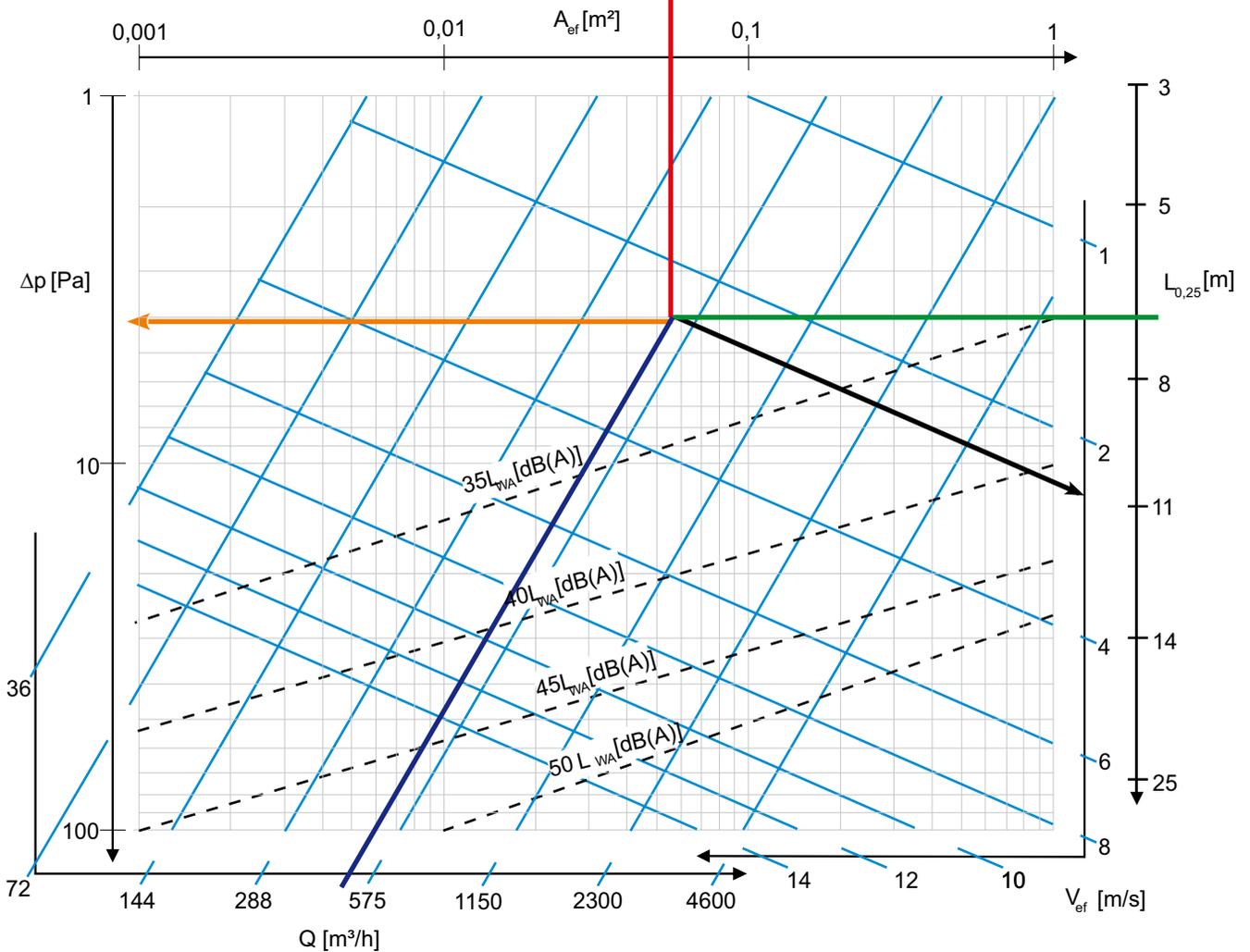


**EXAMPLE**

- specified air volume flow  $Q=500 \text{ m}^3/\text{h}$
- range  $L_{0,25}=7 \text{ m}$

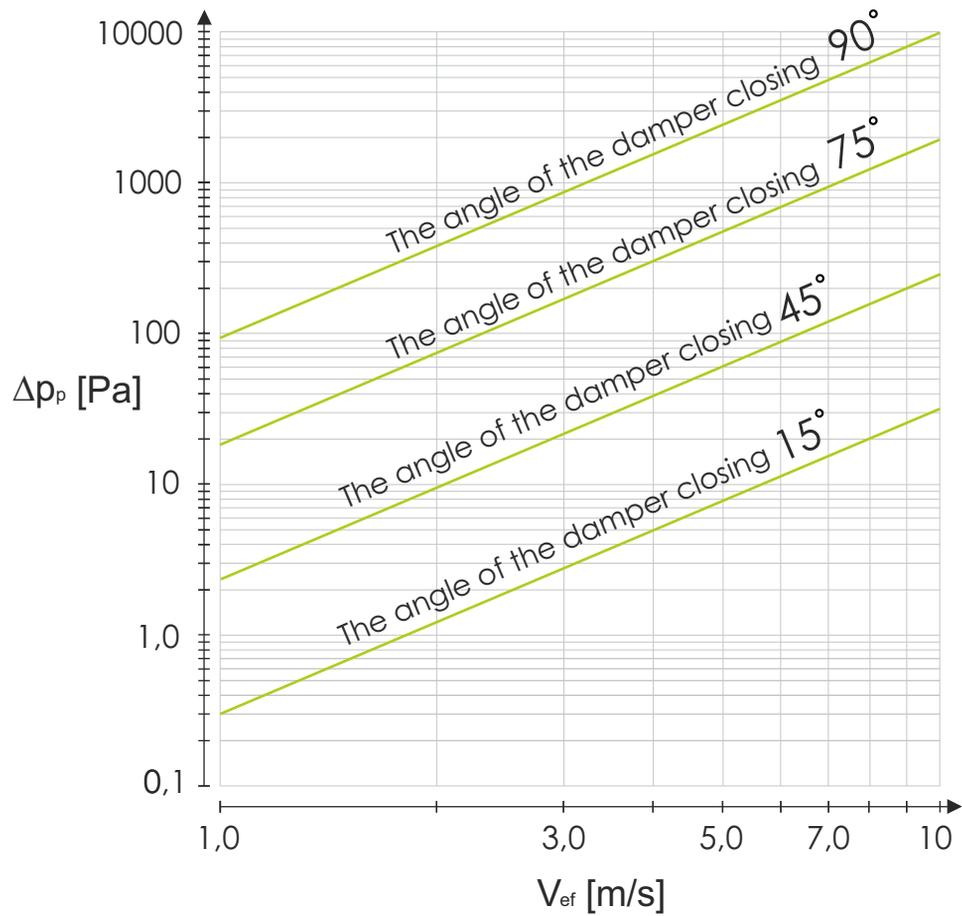
**Reading from the graph:**

- suitable grille: 1225x75, 625x125, 325x225
- $A_{\text{ef}} = 0,05 \text{ m}^2$
- pressure drop: 5 Pa
- effective speed at the outlet: 2,5 m/s
- acoustic power 30 dB

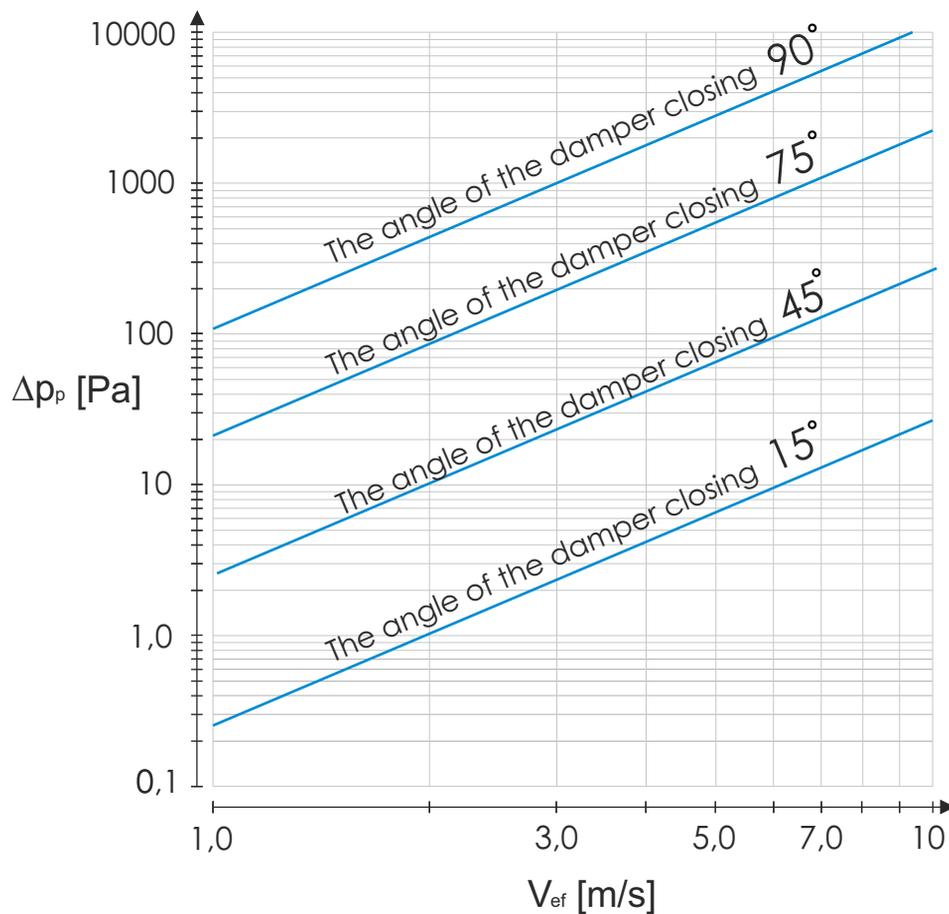


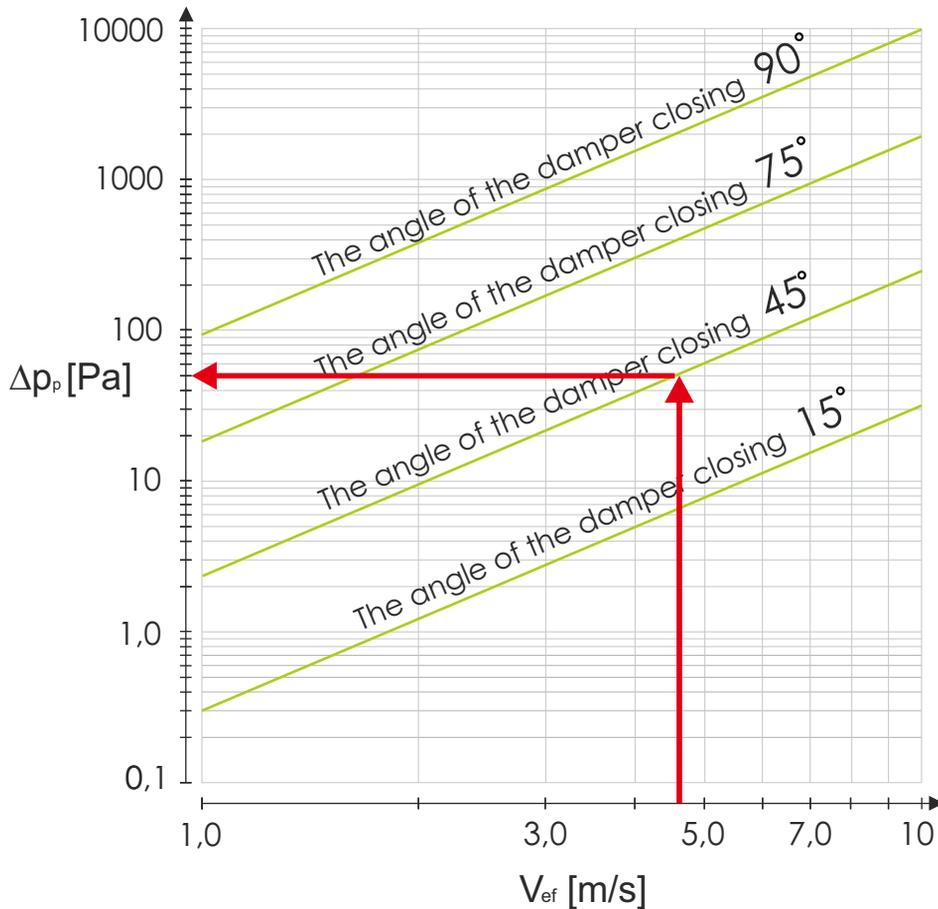
The dependence of pressure drop ( $\Delta p_p$ ) on damper GP from effective speed ( $V_{ef}$ )

Supply air installation



Exhaust ventilation





### Example:

Selection of the grille ST-WG for supply air installation

The angle of the damper closing: **45°**

Size: 125x325 [mm]

Effective speed  $V_{ef}$ : 4,7 [m/s]

Efficiency Q: 500 [m<sup>3</sup>/h]

Range  $L_{0,25}$ : 10 [m]

Acoustic power  $L_{WA}$ : 35 [dB]

Pressure drop on the grille  $\Delta p_k$ : 10 [Pa]

Pressure drop on the damper  $\Delta p_p$ : 50 [Pa]

**The total pressure  $\Delta p$ : 60 [Pa]**

## The method of placing an order

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Please make orders according to the following formula:

**ST-W/ 'G' / 'LxH' / 'RAL' / 'M' / 'W' + 'SR' / 'I' / 'P' / 'K' / 'H'**

'G'	- adjustment by damper <b>GP</b> - regulation by damper with counter running blades behind grille <b>GS</b> - slot damper <b>GU</b> - cantilevered damper
'LxH'	- mounting hole size (width x height) in mm
'RAL'	- grille color according to RAL palette (standard RAL9016*)
'M'	- material: <b>ST</b> - powder coated steel* <b>AL</b> - aluminum powder coated <b>KO</b> - stainless steel / acid proof steel (type 1.4301 or 1.4404)
'W'	- mounting option: <b>W1</b> - visible assembly through screws in holes in grille front frame <b>W2</b> - invisible mounting using latch springs and additional mounting frame <b>W3</b> - invisible assembly using screws, and an additional mounting frame
'SR'	- plenum box: <b>SR-Gw</b> - plenum box with top spigot connection <b>SR-Bw</b> - plenum box with side spigot connection <b>SR-Tw</b> - plenum box with back spigot connection
'I'	- isolation: <b>none</b> - plenum box without isolation* <b>Iz</b> - outside isolation (thermal) <b>Iw</b> - inside isolation (acoustic)
'P'	- adjustment damper at spigot connection: <b>none</b> - no damper* <b>P</b> - damper on spigot connection adjustable from the outside <b>PP</b> - damper on spigot connection adjustable from the inside
'K'	- diameter spigot connection in size mm
'H'	- the height of the plenum box in mm*

\* - If you don't give the information will be used standard parameters.