

**Description and application**

Grilles KSL have the function of supply and exhaust ventilation and equalizing-flow a large extent blocking the visibility. Grilles have still not moving blades. Because to its construction grille are used in areas exposed to mechanical damage (boiler rooms, garages, gyms, as well as external air intakes louvres). On request it is possible to make the grille with a valve for controlling the flow of air. It is designed for wall mounting in prepared before mounting holes or directly on ducts. The frame grille may have embossments for screws, for fixing the grille directly to the wall or mounting is not visible from an additional mounting frame.

**Material and workmanship**

Standard grille is made of powder coated galvanized sheet steel. On the special request it can be made of stainless steel or aluminum and painted in any RAL color. On request, grille may have behind blades extra mesh to protect against from getting to the installation of larger impurities (solution used for assembling grille as external intake louvres). Making an order give the information if the grille will be mounted inside or outside the building.

The manufacturer reserves the right to make production changes.

**Size**

Grilles are manufactured to order. Grilles dimension by the customer request. For  $L > 600$  louvre is divided.

The width of the frame::

- 25mm for  $L$  lub  $H < 1000$ mm
- 50mm for  $L$  lub  $H \geq 1000$ mm

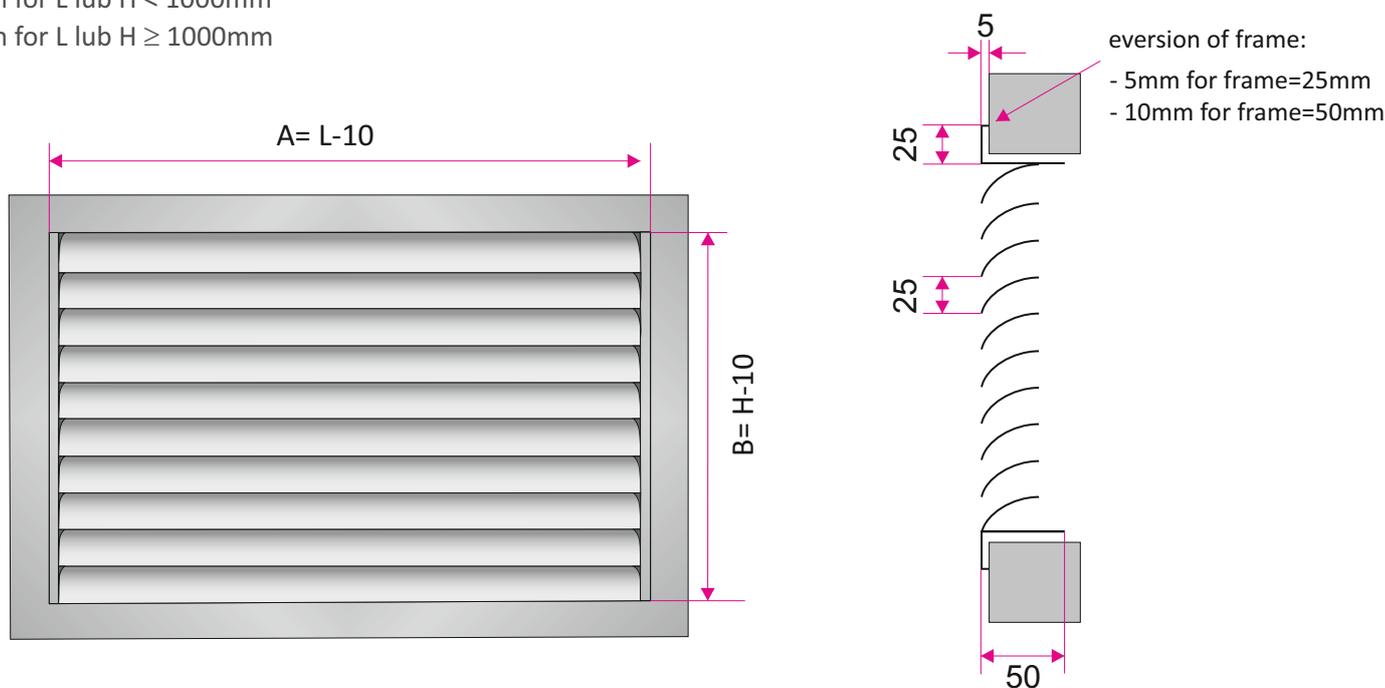
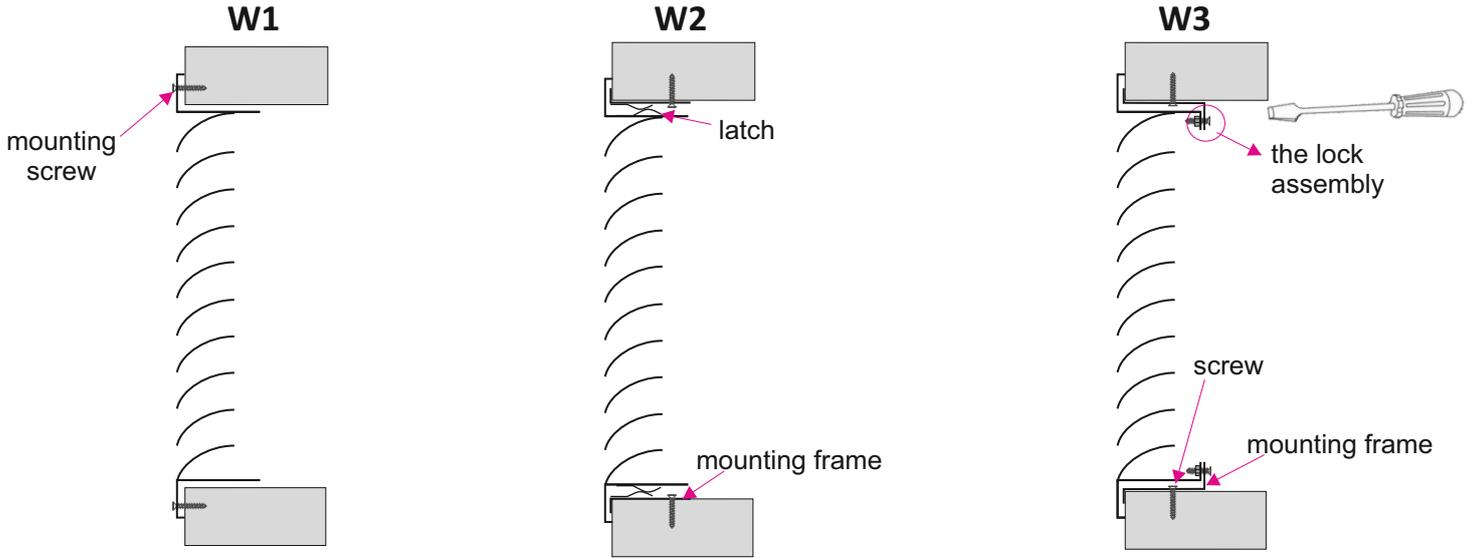


Table of effective area  $A_{ef}$  ( $m^2$ ) wall grilles KSL

$H$ [mm] \ $L$ [mm]	225	325	425	525	625	825	1025	1225
	$A_{ef}$ ( $m^2$ ) effective area							
125	0,012	0,018	0,024	0,029	0,035	0,047	0,058	0,069
225	0,023	0,034	0,044	0,055	0,066	0,087	0,109	0,130
325		0,049	0,065	0,081	0,097	0,128	0,159	0,191
425			0,086	0,107	0,127	0,169	0,210	0,252
525				0,133	0,158	0,209	0,261	0,313
625					0,189	0,250	0,312	0,373
825						0,332	0,413	0,495

Grilles are made on request.

The dimensions in the table are only used for determine the effective area the grille.

**Methods of mounting**


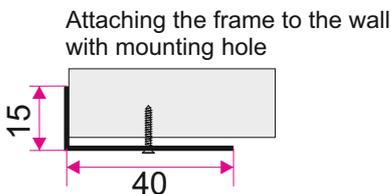
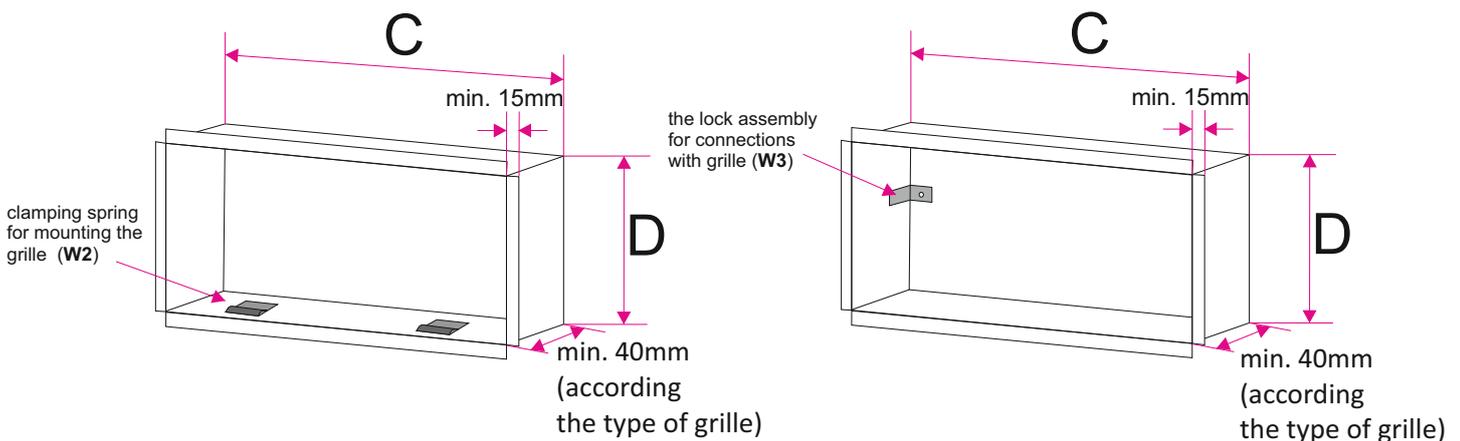
Assembling visible through screws and mounting holes in the grille frame.

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. Installation possible from the other side of room, partition and doors.

**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.



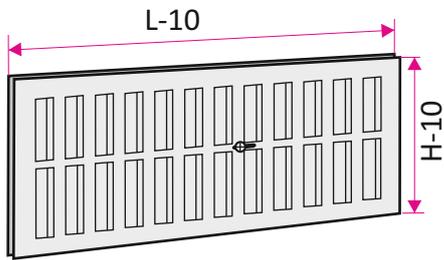
$$C = L - 5$$

$$D = H - 5$$

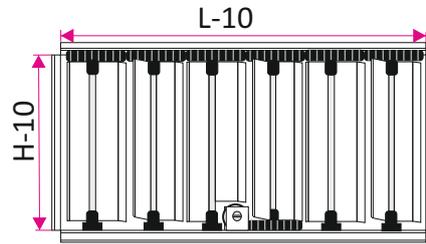
LxH - size of mounting hole

**Accessories- dampers**

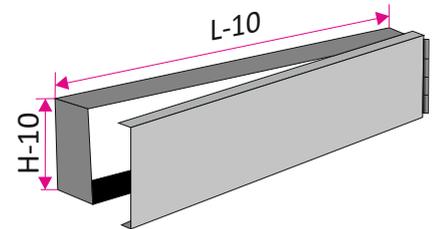
Grille KSL can also be equipped with a damper, positioned directly behind the grille blades. In this type of grill, damper regulation is possible from the front side of grille, after it's disassembly. Below there are the types of dampers used for the ventilation grilles.



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



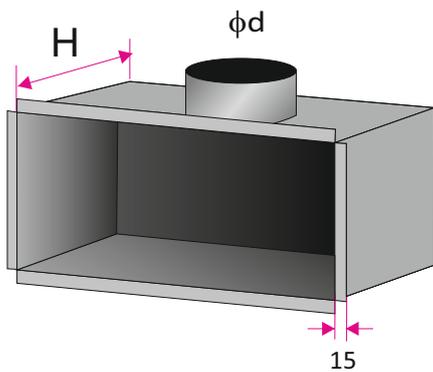
**GP** - damper with counter running blades  
(above the size of 525x425  
the damper must be divided)



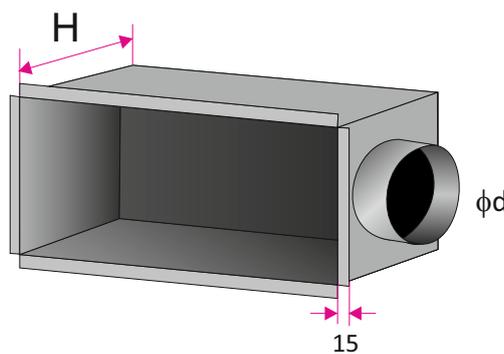
**GU** - cantilevered damper  
(especially recommended  
for grilles to spiro channel)

**Accessories- plenum box**

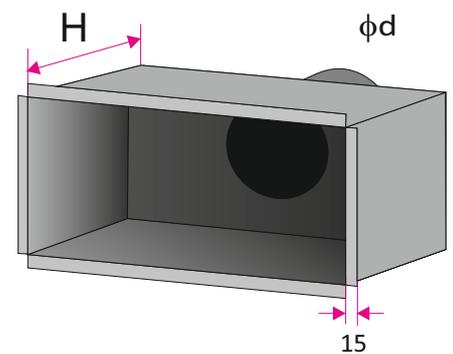
Plenum box is made of galvanized steel. On request it can be equipped with a damper control onto the connected spigot. The plenum box is isolated inside with rubber (acoustic) or outside with mineral wool (thermal). In the standard height of the plenum box is adapted to size of the spigot or diffuser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

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 ( $Q$ ).

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.

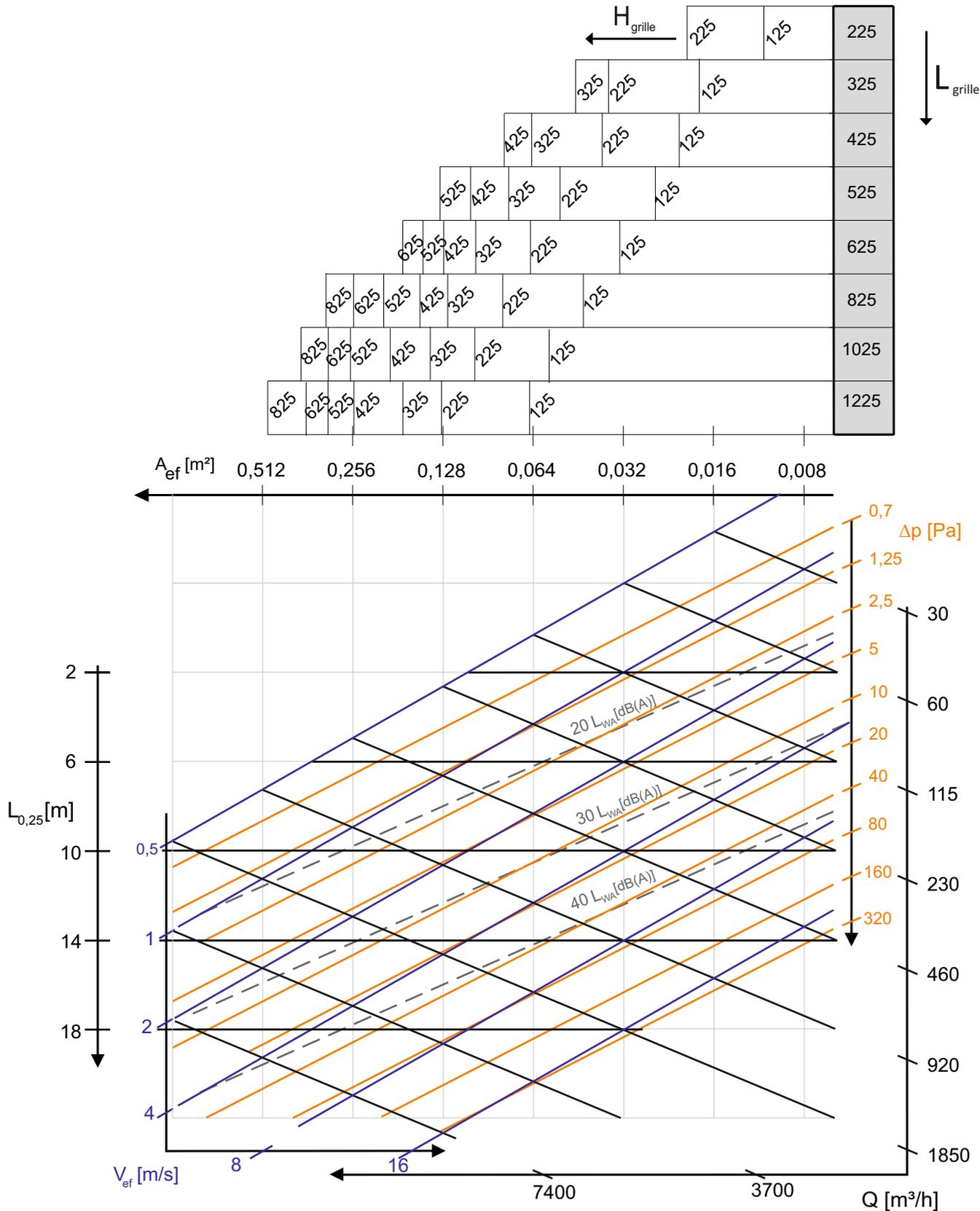


Table of effective area  $A_{ef}$  (m<sup>2</sup>) wall grilles KSL

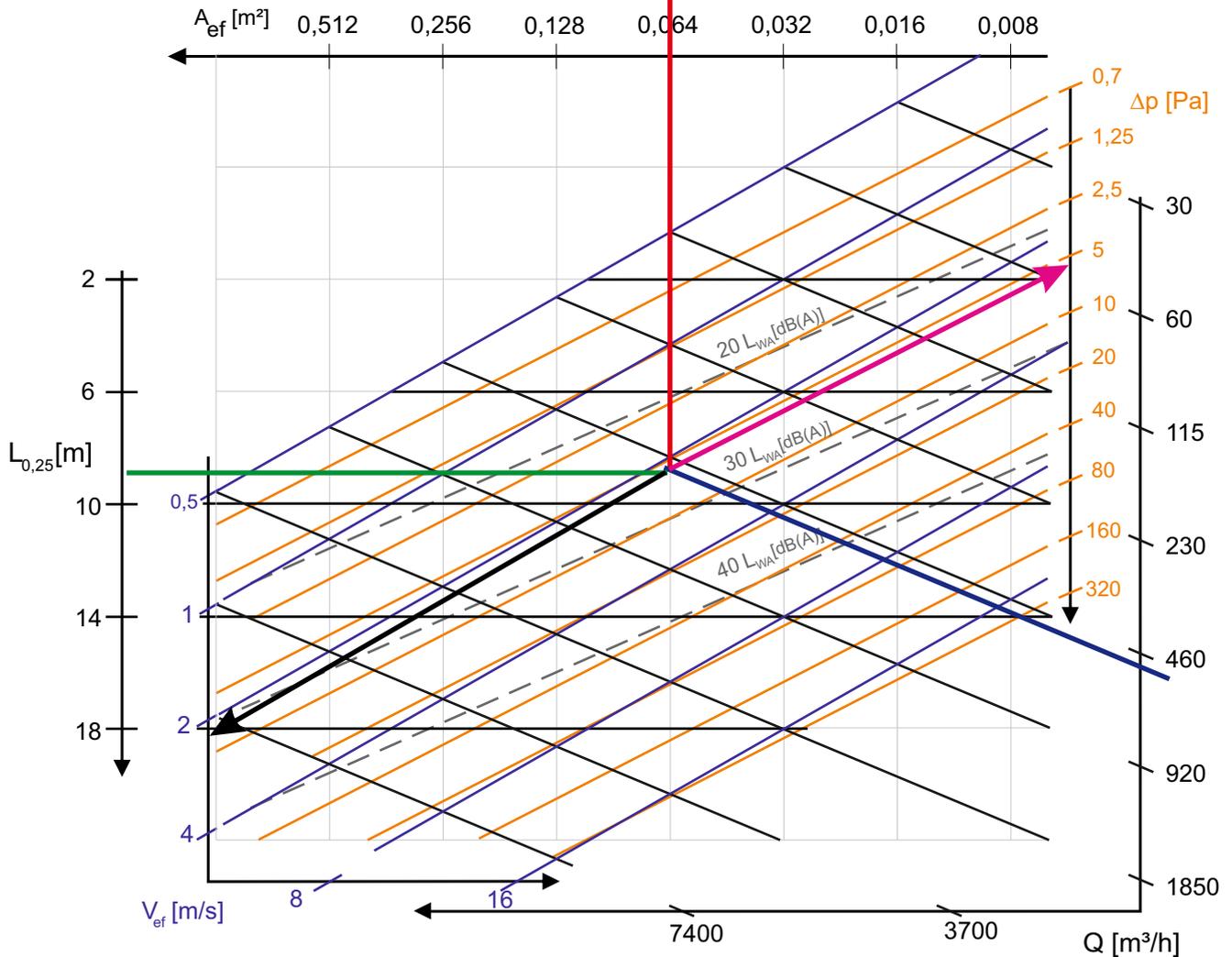
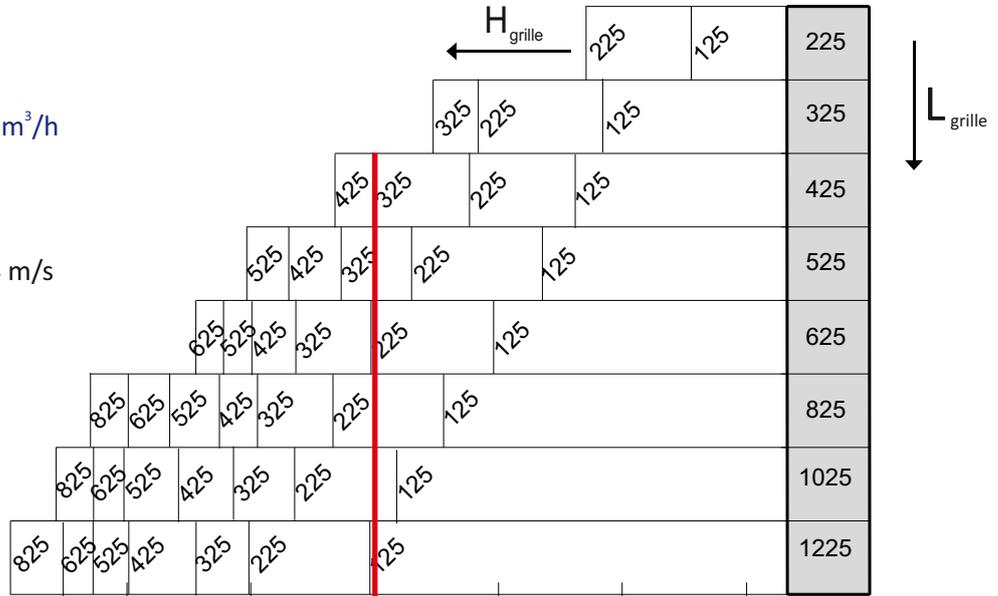
H [mm] \ L [mm]	325	425	525	625	825	1025	1225
125	0,018	0,024	0,029	0,035	0,047	0,058	<b>0,069</b>
225	0,034	0,044	0,055	<b>0,066</b>	<b>0,087</b>	<b>0,109</b>	0,130
325	0,049	<b>0,065</b>	<b>0,081</b>	0,097	0,128	0,159	0,191

**EXAMPLE**

- specified air volume flow  $Q=500 \text{ m}^3/\text{h}$
- range  $L_{0,25}=9 \text{ m}$

**Reading from the graph:**

- effective speed at the outlet: 2,4 m/s
- pressure drop: 6 Pa
- acoustic power 25 dB
- indicative  $A_{ef} = 0,064 \text{ m}^2$
- suitable grille:  
425x325, 625x225, 1225x125  
(selected from table  $A_{ef}$ )



## The method of placing an order

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Please make orders according to the following formula:

**KSL/ 'G' / 'LxH' / 'RAL' / 'M' / 'W' / 'MM' + 'SR' / 'I' / 'P' / 'K' / 'H'**

'G'	- adjustment by damper <b>none</b> - grille without 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>OC</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
'MM'	- mounting place <b>W</b> - inside building <b>Z</b> - outside building (elevation, outside doors)
'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.