

Description and application

Grille KOWP-1 has been created especially for buildings of high standard, where aesthetics are important in spaces such as hotels and conference rooms. Grille performs the functions of supply and exhaust air. It is designed for wall mounting in previously prepared mounting holes. The grille frame may have embossing on the screws, for attaching the grille directly to the wall. Solid construction and material causes KOWP-1 is resistant to mechanical damage, so that it can also be mounted in sports halls.

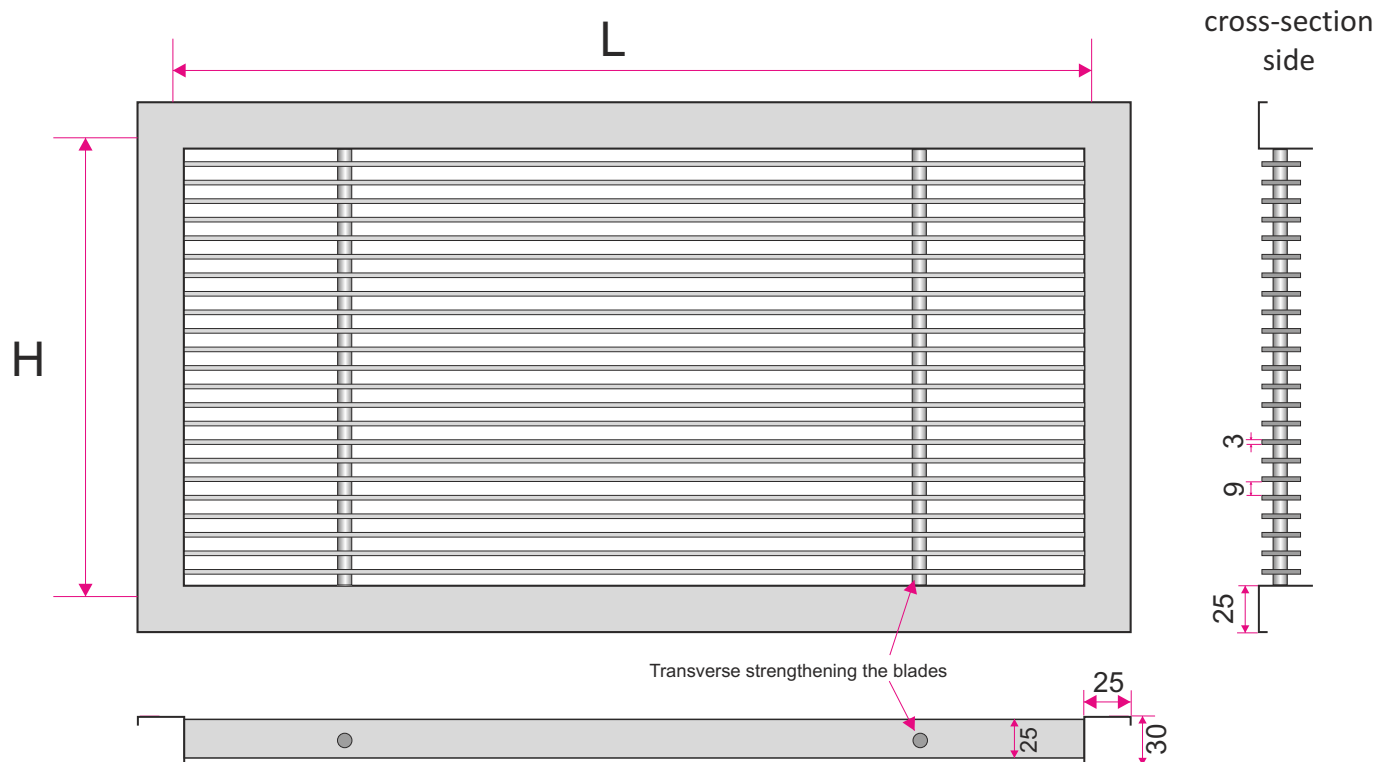
Grille has Hygienic Certificate HK/K/0522/01/2016

Material and workmanship

All grille is made of stainless steel (type 1.4301 or 1.4404). On customer request can be powder coated to any color from the RAL palette. Grille frame is produced in two variants - eversion on the wall or angle bar (with an additional frame for invisible installation).

Size

Grilles are manufactured to order. Grilles dimension by the customer request.



H - the height of the mounting hole

L - the width of the mounting hole

Technical data - effective area air flow (example sizes)

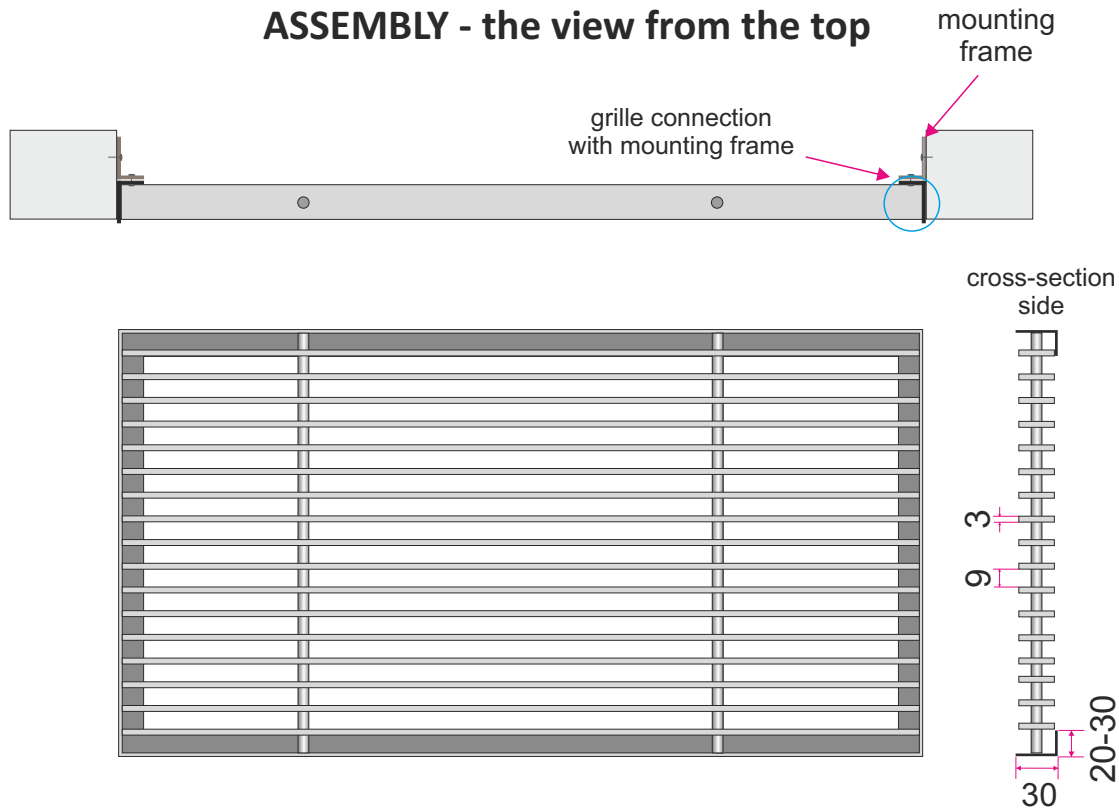
H \ L	225	325	425	525	625	825	1025	1225
mm	Aef (m ²) effective area							
125	0,0108	0,0170	0,0232	0,0294	0,0356	0,0478	0,0602	0,0726
225	0,0242	0,0380	0,0518	0,0656	0,0794	0,1064	0,1340	0,1616
325		0,0580	0,0791	0,1002	0,1213	0,1627	0,2049	0,2471
425			0,1076	0,1363	0,1650	0,2213	0,2787	0,3361
525				0,1724	0,2087	0,2799	0,3525	0,4251
625					0,2507	0,3361	0,4233	0,5105

Grilles are made to order, according to measures LxH. The dimensions in the table are only used for determining the grille effective area.

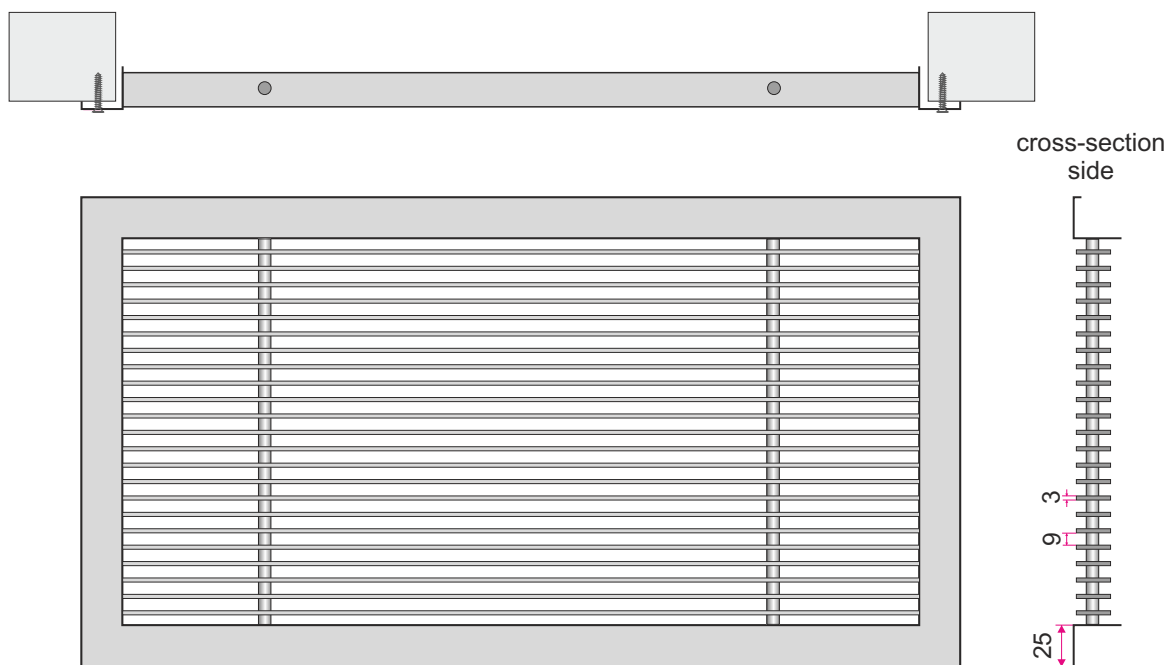
Execution details

The frame is made in a standard version with eversion 25mm to screw the grille. It is also possible to make grille in the frame of an angle bar (KOWP-1k).

ASSEMBLY - the view from the top

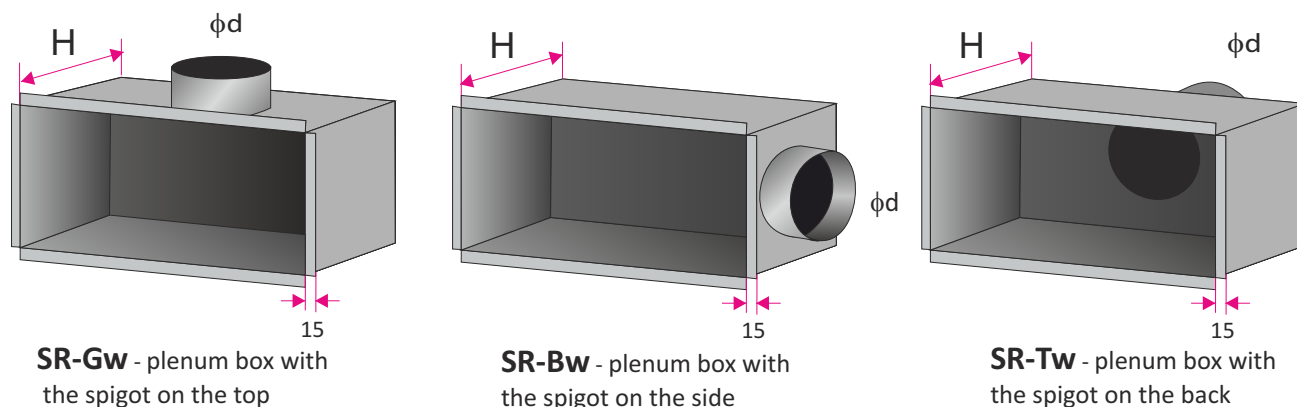


ASSEMBLY - the view from the top



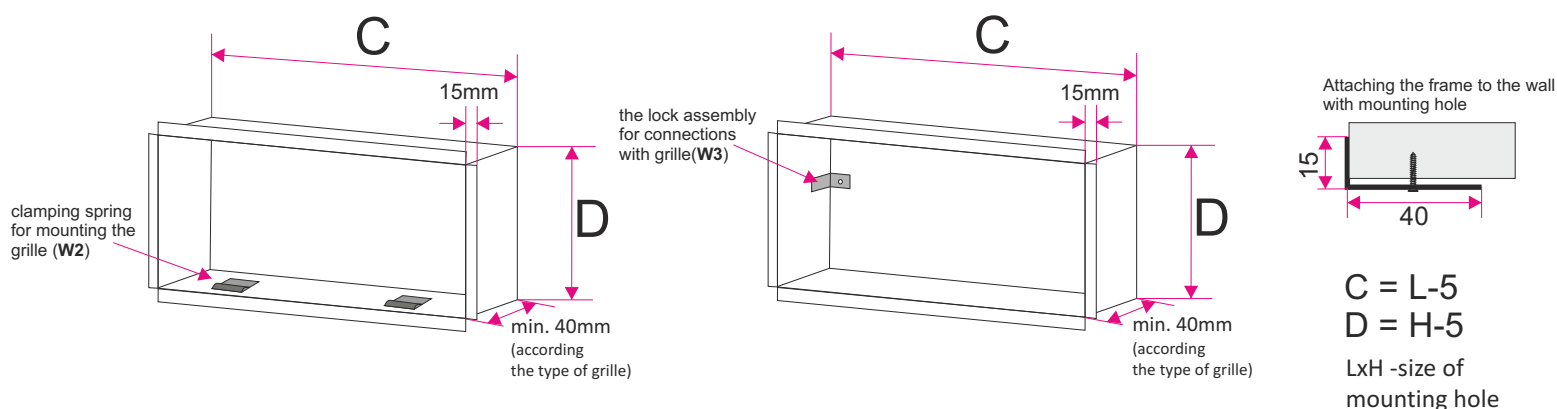
Accessories- plenum box

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).



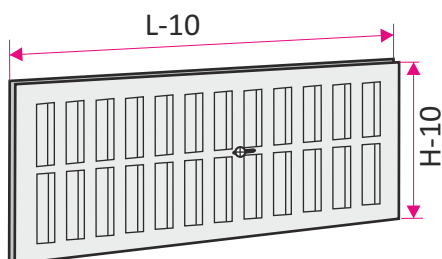
Accessories - RM frame for invisible installation

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

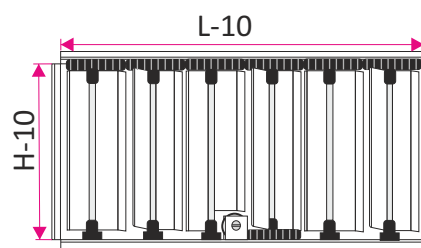


Accessories- dampers

Grille KOWP-1 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, without the need for disassembly (between the blades). Below there are the types of dampers used for the ventilation grilles.

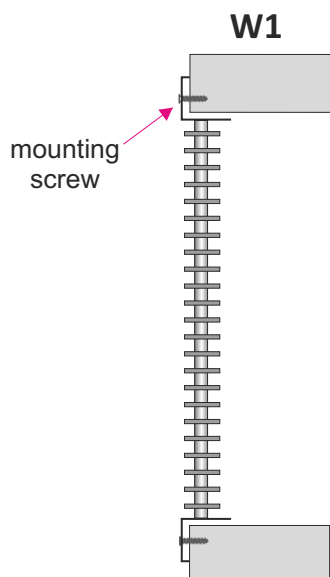


GS - slot damper
 (above the size of 525x425
 the damper must be divided)

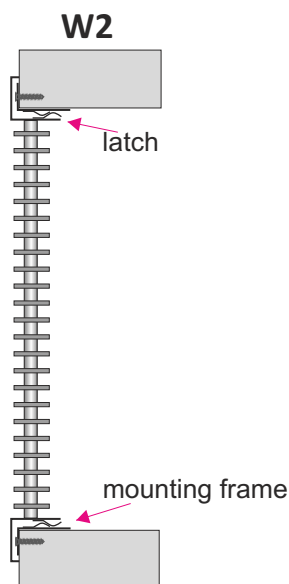


GP - damper with counter running blades
 (above the size of 525x425
 the damper must be divided)

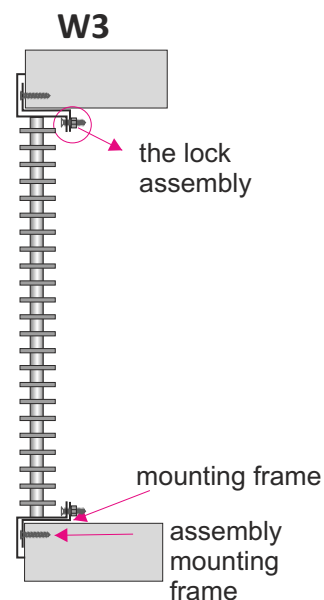
Methods of mounting - KOWP-1



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.

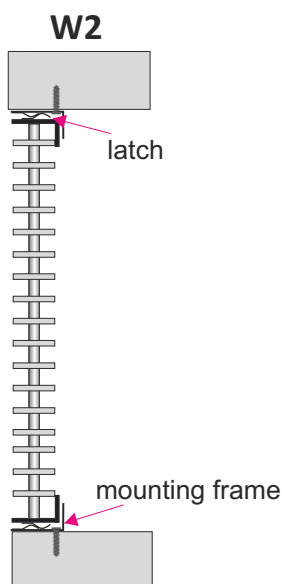


Assembling invisible by screws and lock assembly in mounting frame RM or in plenum box. Option recommended for invisible installation in the ceiling.

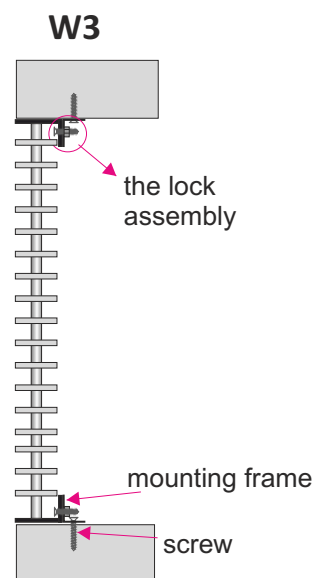
Methods of mounting - KOWP-1k

W1

no option



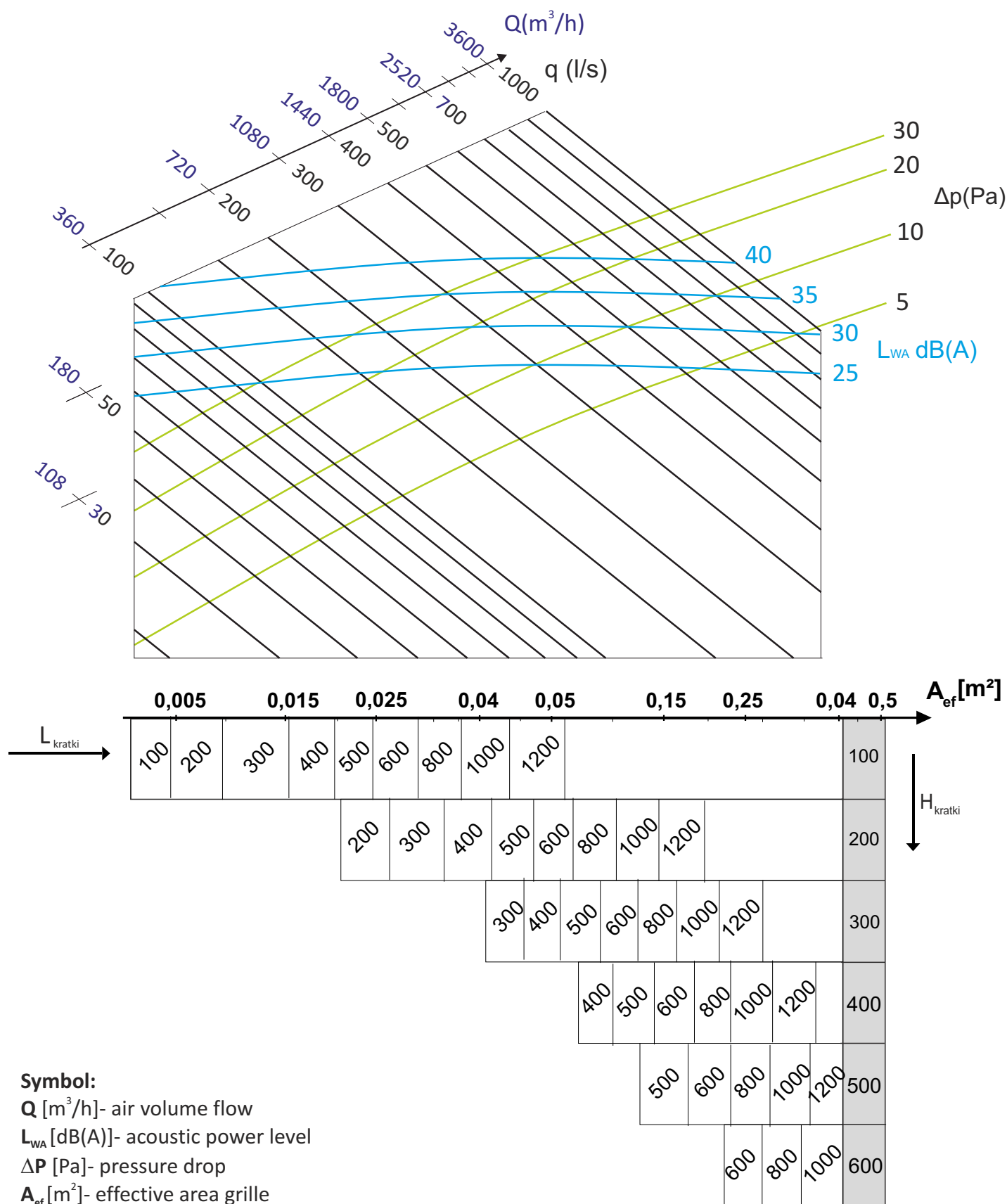
Assembling invisible by latches in grille and mounting frame RM or in plenum box.



Assembling invisible by screws and lock assembly in mounting frame RM or in plenum box. Option recommended for invisible installation in the ceiling.

Technical data

The dependence of pressure drop Δp (Pa) and acoustic power level L_{WA} (dB) of air volume flow Q (m^3/h).



Symbol:

Q [m^3/h]- air volume flow

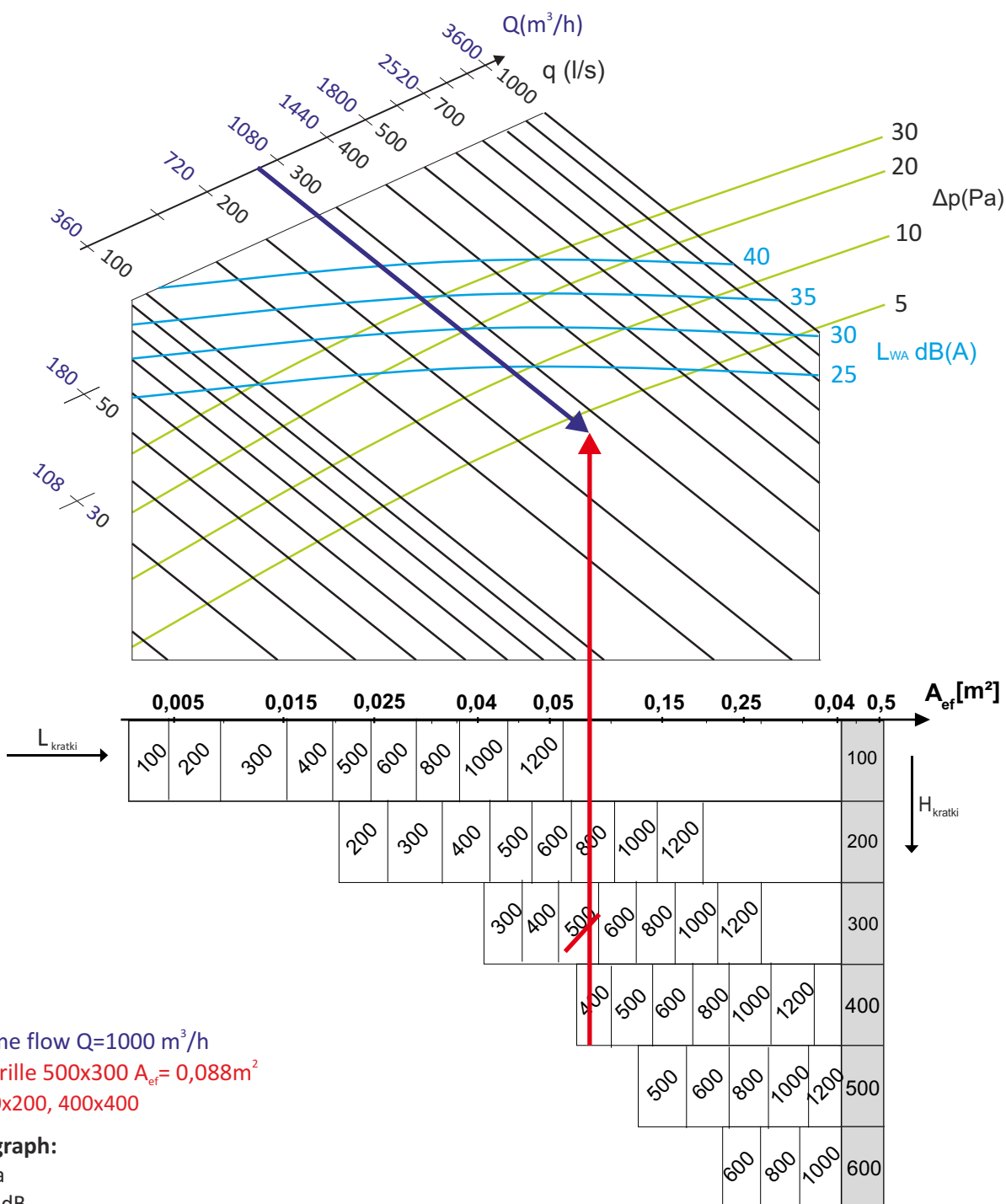
L_{WA} [dB(A)]- acoustic power level

ΔP [Pa]- pressure drop

A_{ef} [m^2]- effective area grille

EXAMPLE

H [mm] \ L [mm]	100	200	300	400	500	600	800	1000	1200
A _{ef} (m ²) powierzchnia efektywna									
100	0,003	0,007	0,011	0,016	0,020	0,025	0,034	0,045	0,054
200		0,018	0,026	0,043	0,054	0,066	0,091	0,115	0,139
300			0,050	0,069	0,088	0,108	0,147	0,187	0,224
400				0,095	0,121	0,148	0,202	0,256	0,310
500					0,155	0,190	0,257	0,326	0,395
600						0,231	0,316	0,400	0,485



EXAMPLE

- specified air volume flow $Q=1000 m^3/h$
- effective area of grille $500 \times 300 A_{ef}= 0,088 m^2$
alternative size $800 \times 200, 400 \times 400$

Reading from the graph:

- pressure drop: 5 Pa
- acoustic level: <25 dB

The method of placing an order

Please make orders according to the following formula:

KOWP-1/ 'R' / 'G' / 'LxH' / 'RAL' / 'W' + 'SR' / 'I' / 'P' / 'K' / 'H'

'R'	the frame type none - standard frame with eversion k - frame with angle bar (L)
'G'	- adjustment by damper none - grille without damper* GP - regulation by damper with counter running blades behind grille GS - slot damper
'LxH'	- mounting hole size (width x height) in mm
'RAL'	- grille color according to RAL palette (standard RAL9016*)
'W'	- mounting option: W1 - visible assembly through screws in holes in grille front frame * W2 - invisible mounting using latch springs and additional mounting frame W3 - invisible assembly using screws and an additional mounting frame
'SR'	- plenum box: SR-Gw - plenum box with top spigot connection SR-Bw - plenum box with side spigot connection SR-Tw - plenum box with back spigot connection
'I'	- isolation: none - plenum box without isolation* lz - outside isolation (thermal) lw - inside isolation (acoustic)
'P'	adjustment damper at spigot connection: none - no damper* P - damper on spigot connection adjustable from the outside PP - 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.