

Description and application

Grilles KPZ have the function of supply and exhaust ventilation and equalizing-flow. 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.

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

Material and workmanship

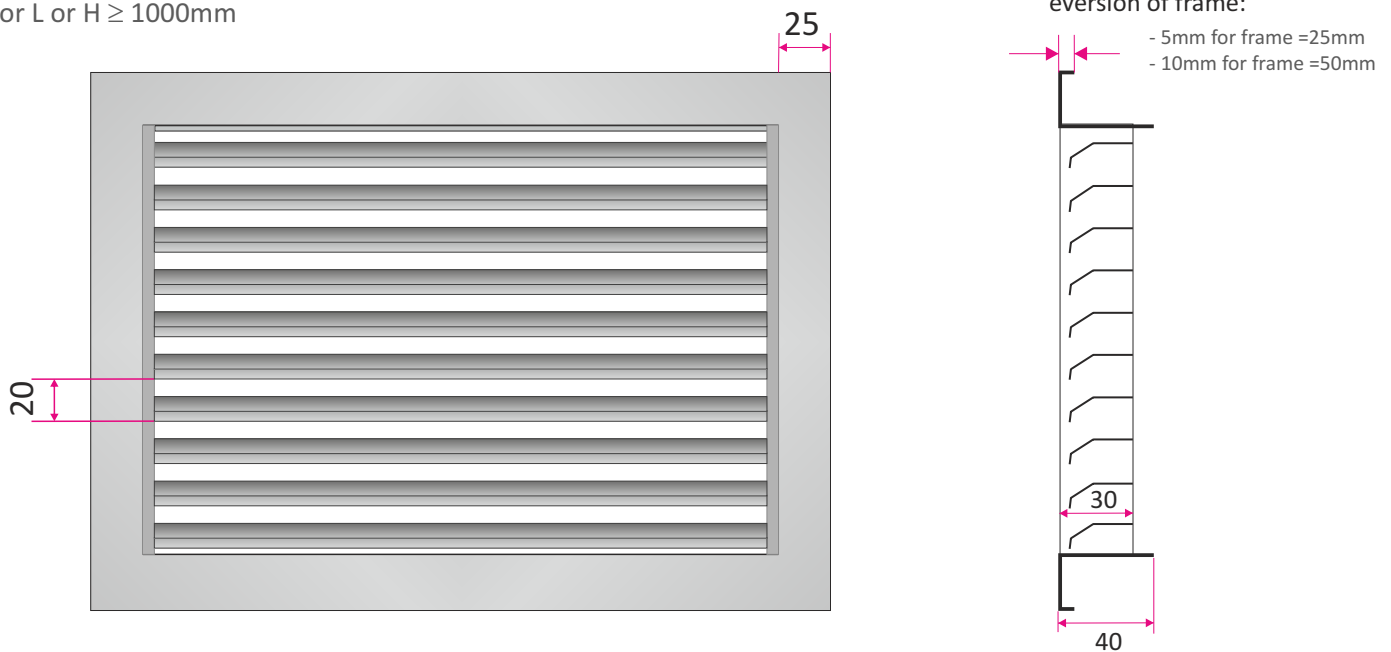
Standard grille is made of powder coated galvanized sheet steel. On the special request it can be made of stainless steel or aluminum and painted in any RAL color. On request, grille may have behind blades extra mesh to protect against from getting to the installation of larger impurities (solution used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

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 or H < 1000mm
- 50mm for L or H ≥ 1000mm



Technical data - The effective area of air flow

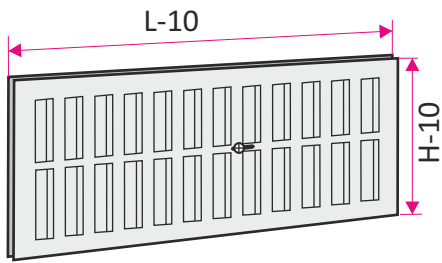
H \ L	200	300	400	500	600	800	1000	1200
mm	Aef (m ²) effective area							
100	0,011	0,016	0,023	0,028	0,033	0,044	0,055	0,67
200	0,023	0,036	0,048	0,060	0,073	0,099	0,124	0,149
300	0,036	0,055	0,075	0,094	0,114	0,153	0,193	0,232
400	0,048	0,075	0,102	0,128	0,155	0,208	0,261	0,314
500	0,060	0,094	0,128	0,162	0,195	0,262	0,330	0,397
600	0,073	0,114	0,155	0,195	0,236	0,317	0,399	0,480
800	0,099	0,153	0,208	0,262	0,317	0,427	0,536	0,645

Grilles are made on request. The dimensions in the table are only used for determine the effective area the grille.

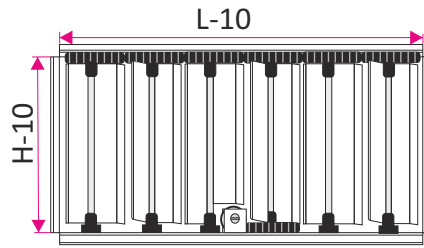
L i H - mounting size hole

Accessories- dampers

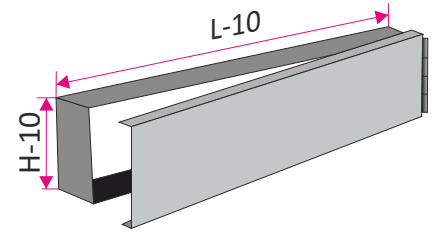
Grille KPZ can also be equipped with a damper, positioned directly behind the grille blades. In this type of grill, damper regulation is possible from the front side of grille, after it's disassembly. Below there are the types of dampers used for the ventilation grilles.



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

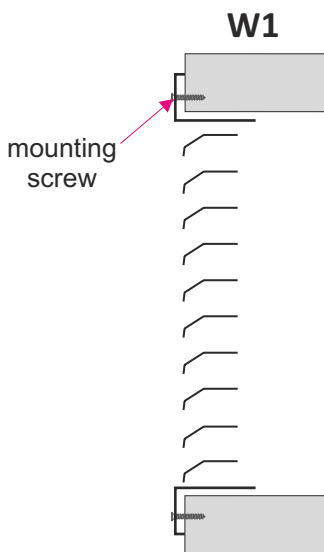


GP - damper with counter running blades
(above the size of 525x425
the damper must be divided)

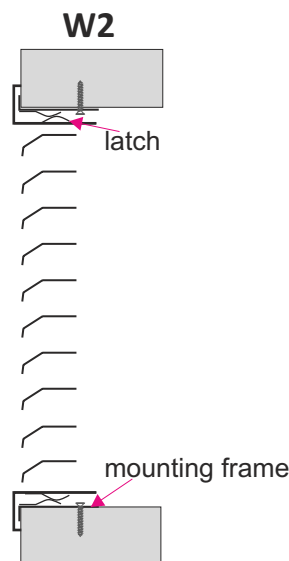


GU - cantilevered damper
(especially recommended
for grilles to spiro channel)

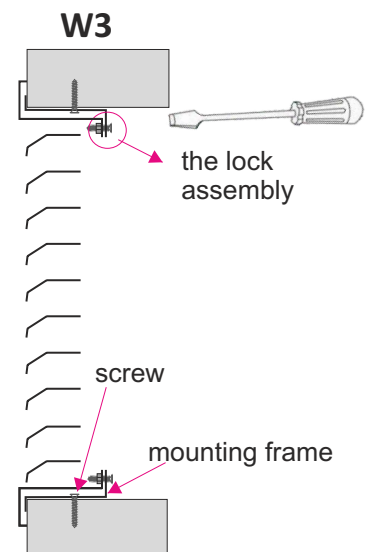
Methods of mounting



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



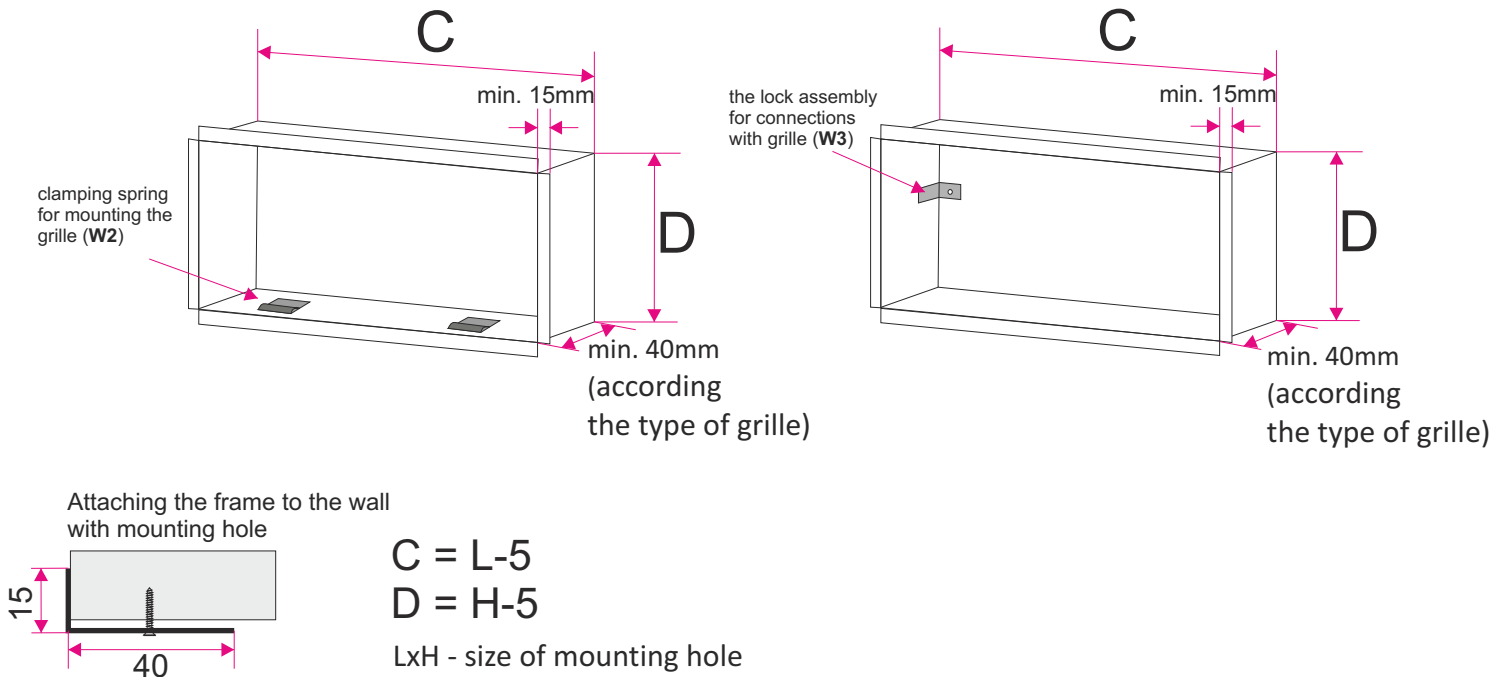
Assembling invisible by latches in grille and mounting frame RM or in plenum box.



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.

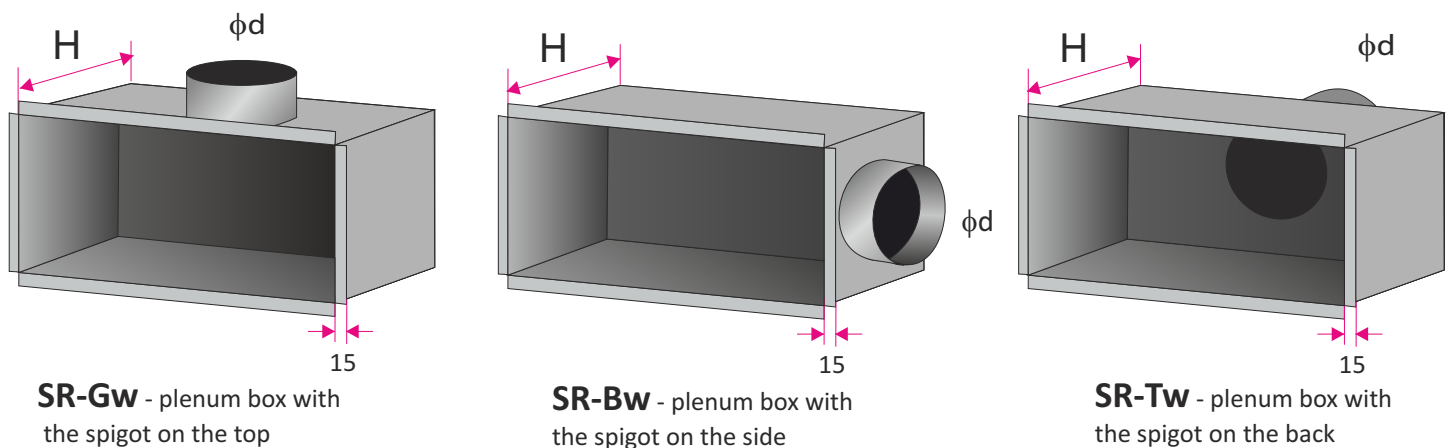
Accessories - RM frame for invisible installation

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.



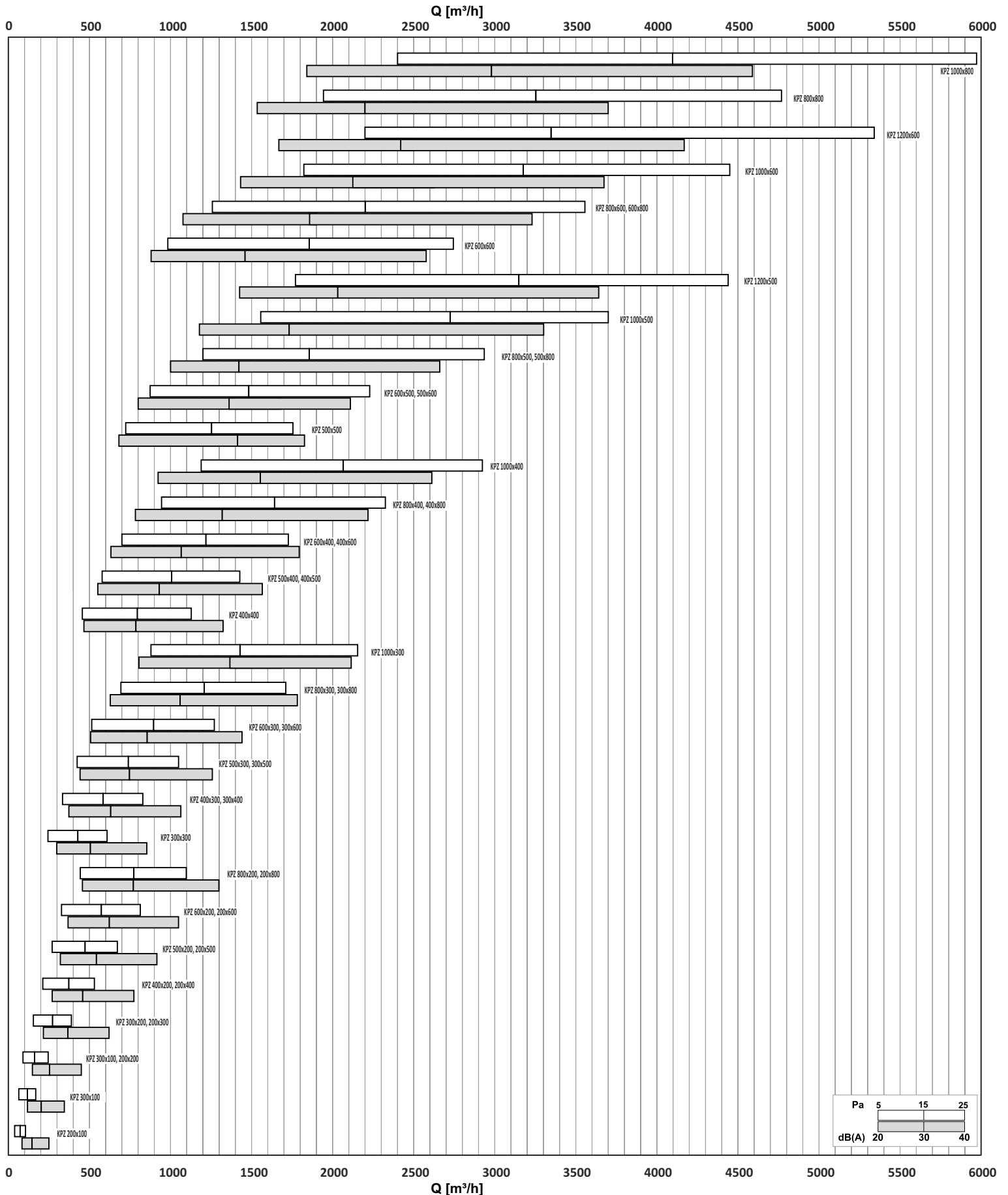
Accessories - plenum box

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).



Technical data

The dependence of pressure drop Δp [Pa] and acoustic power level L_{WA} [dB(A)] depending of the air volume flow Q [m³/h].



EXAMPLE

- grille size: 600x400
- $Q=1000 \text{ m}^3/\text{h}$
- $A_{ef}= 0,155 \text{ m}^2$

$$v = \frac{Q}{3600 \cdot A_{ef}} \text{ [m/s]}$$

$$v = \frac{1000}{3600 \cdot 0,155} = 1,8 \text{ [m/s]}$$

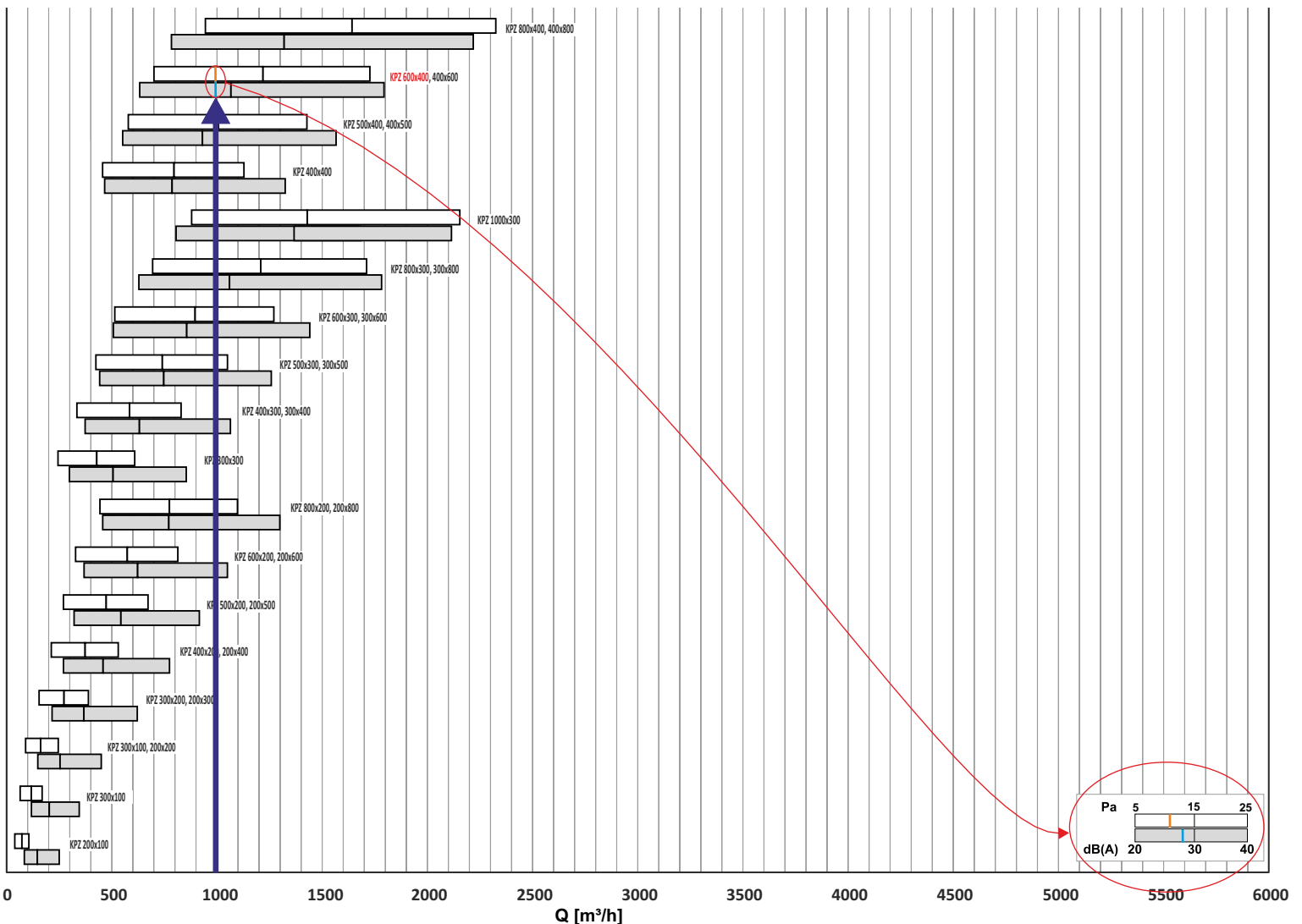
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EXAMPLE

- air volume flow $Q=1000 \text{ m}^3/\text{h}$
- grille size: 600x400 ($A_{ef}= 0,155 \text{ m}^2$)

Reading from the graph:

- pressure drop on louvre $\Delta p=12 \text{ Pa}$
- acoustic power $L_{wa}=28 \text{ dB(A)}$



The method of placing an order

Please make orders according to the following formula:

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

'G'	- adjustment by damper none - grille without damper* GP - regulation by damper with counter running blades behind grille GS - slot damper GU - cantilevered damper
'LxH'	- mounting hole size (width x height) in mm
'RAL'	- grille color according to RAL palette (standard RAL9016*)
'M'	- material: ST - powder coated steel* AL - aluminum powder coated KO - stainless steel / acid proof steel (type 1.4301 or 1.4404)
'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 - mounting place:
'MM'	W - inside building Z - outside building (elevation, outside doors)
'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* Iz - outside isolation (thermal) Iw - 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.