

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.

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.

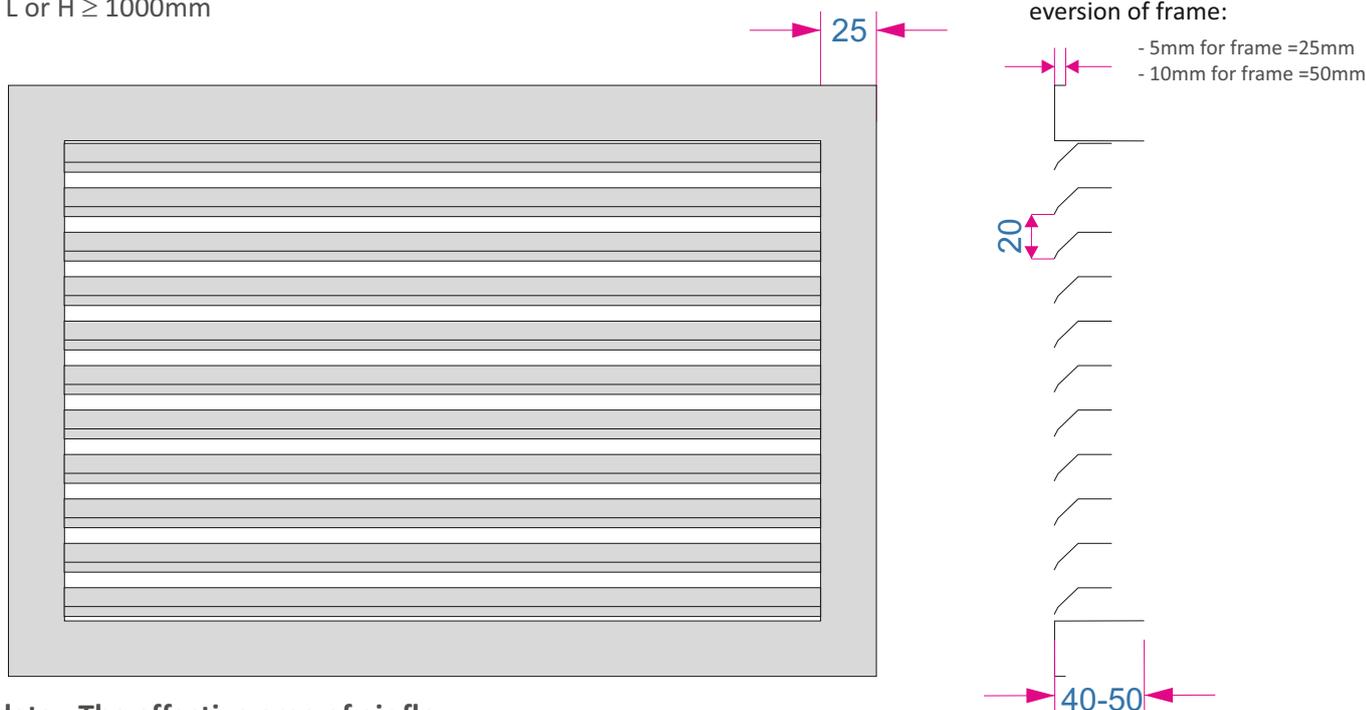
The manufacturer reserves the right to make technological changes.

Size

Grilles are manufactured to order. Grilles dimension by the customer request. For $L \geq 1000$ louvre is divided.

The width of the frame:

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



Technical data - The effective area of air flow

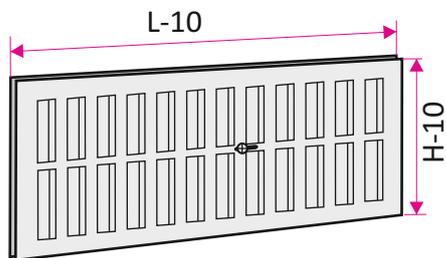
H \ L	200	300	400	500	600	800	1000	1200	1500
mm	Aef (m ²) effective area								
100	0,013	0,019	0,025	0,032	0,038	0,050	0,063	0,075	0,092
200	0,023	0,035	0,047	0,059	0,071	0,094	0,118	0,142	0,184
300	0,035	0,053	0,072	0,090	0,108	0,145	0,182	0,218	0,279
400	0,047	0,072	0,096	0,121	0,153	0,195	0,245	0,294	0,372
500	0,059	0,090	0,121	0,153	0,184	0,246	0,308	0,370	0,471
600	0,071	0,109	0,146	0,184	0,221	0,296	0,371	0,447	0,567
800	0,096	0,146	0,196	0,246	0,297	0,397	0,498	0,599	0,759
1000	0,120	0,183	0,246	0,309	0,372	0,498	0,625	0,751	0,950

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

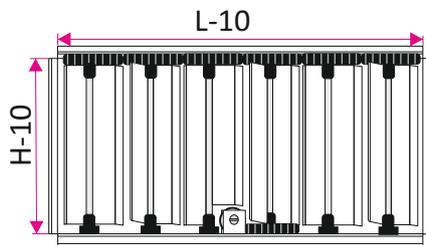
L and H - mounting size hole

Accessories- dampers

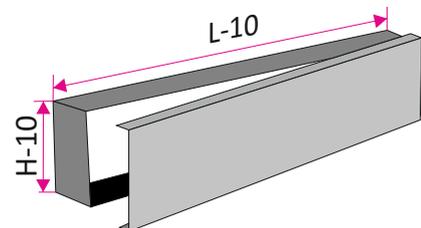
Grille KPZ can also be equipped with a damper, positioned directly behind the grille blades. In this type of grill, damper regulation is possible from the front side of grille, after it's disassembly. Below there are the types of dampers used for the ventilation grilles.



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

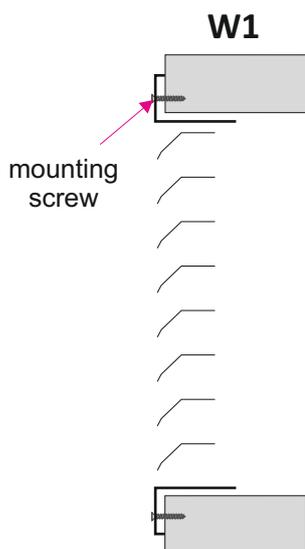


GP - damper with counter running blades
(above the size of 525x425
the damper must be divided)

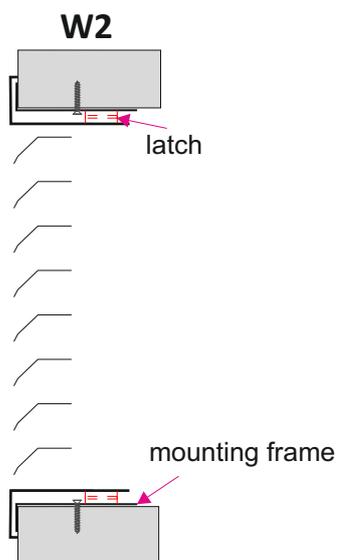


GU - cantilevered damper
(especially recommended
for grilles to spiro channel)

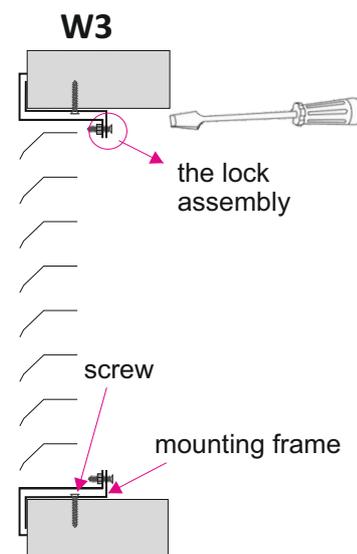
Methods of mounting



Assembling visible through screws and mounting holes in the grille frame.
The depth of the grille for W1 installation is 40mm.



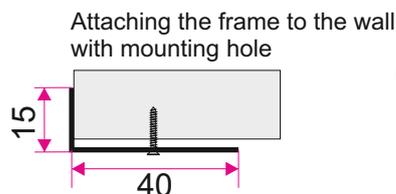
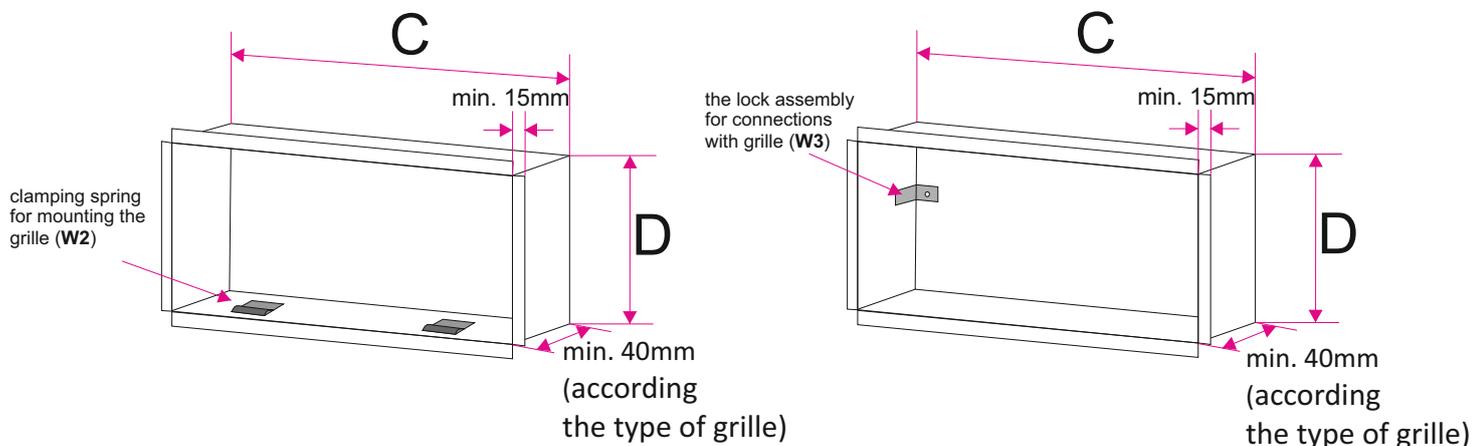
Assembling invisible by latches in grille and mounting frame RM or in plenum box.
The depth of the grille for W2 installation is 50mm.



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. The depth of the grille for W3 installation is 40mm.

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.



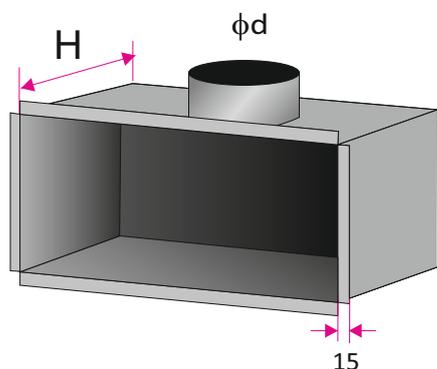
$$C = L - 5$$

$$D = H - 5$$

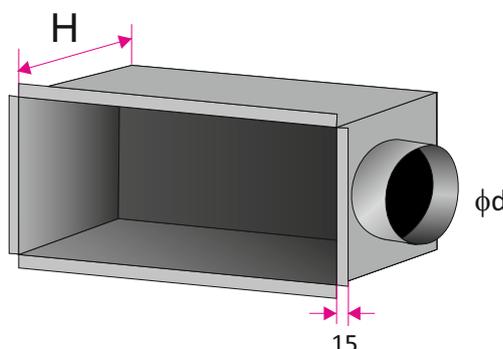
LxH - size of mounting hole

Accessories - plenum box

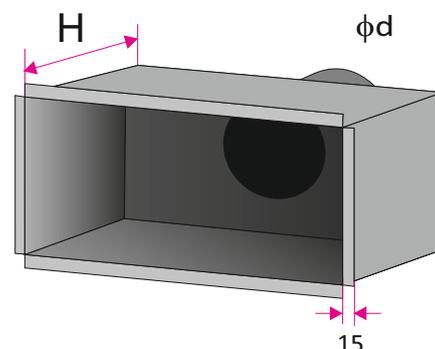
Plenum box is made of galvanized steel. On request it can be equipped with a damper control onto the connected spigot. The plenum box is isolated inside with rubber (acoustic) or outside with mineral wool (thermal). In the standard height of the plenum box is adapted to size of the spigot or diffuser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



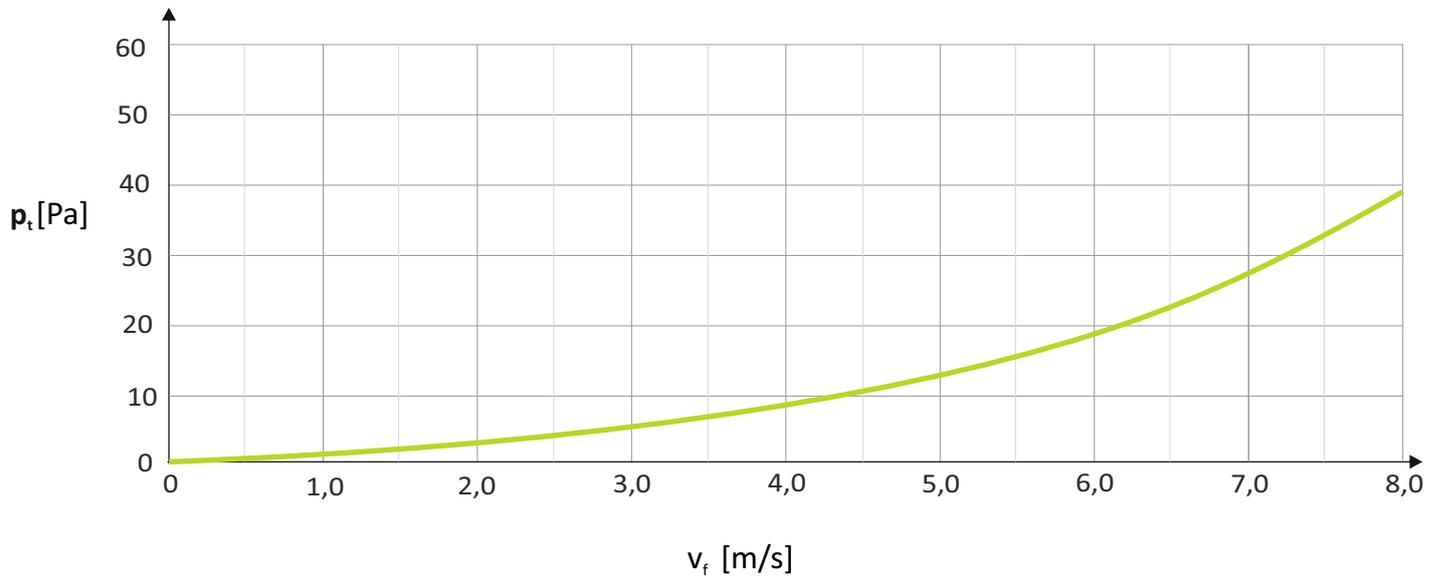
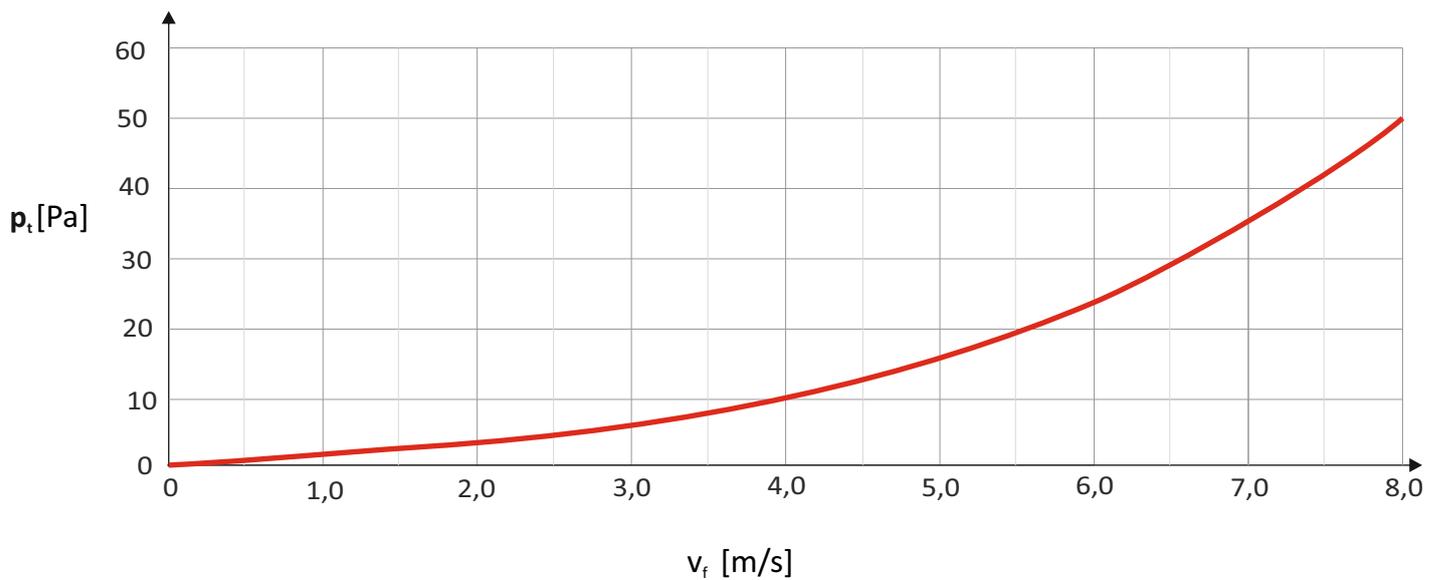
SR-Gw - plenum box with the spigot on the top



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



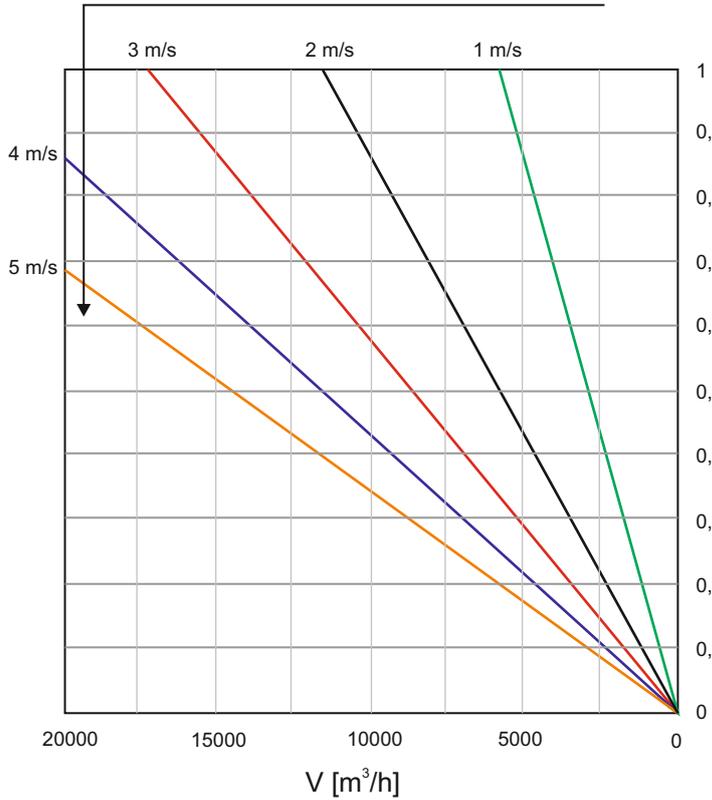
SR-Tw - plenum box with the spigot on the back

Technical data
Dependence of total pressure losses p_t [Pa] as a function of air supply

Dependence of total pressure losses p_t [Pa] as a function of exhaust air


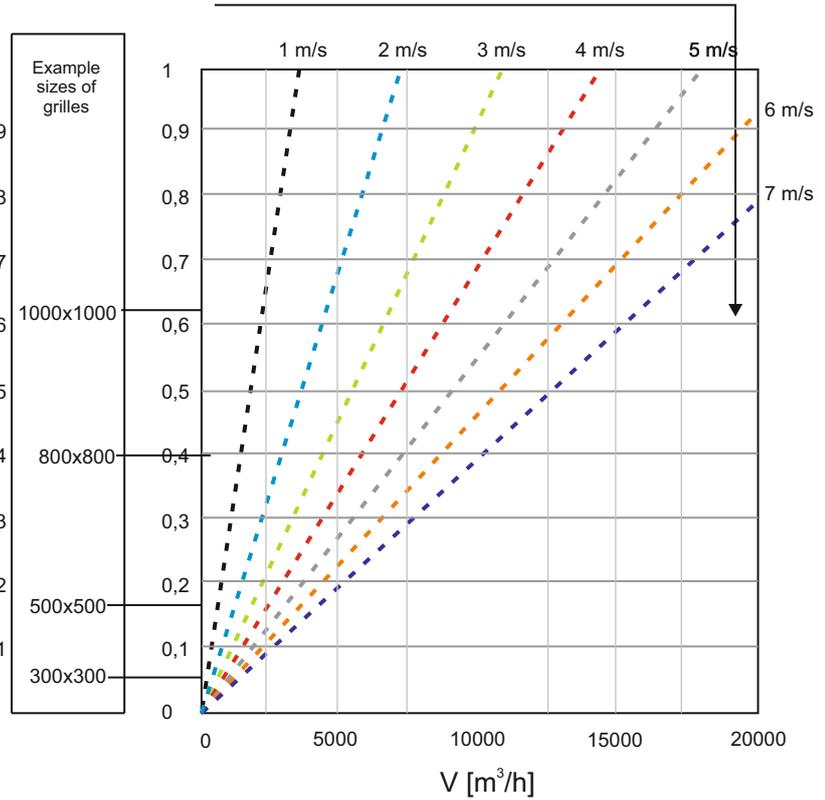
Technical data

Effective area A_f [m²] as a function of the volume flow rate V [m³/h] in relation to the average speed in the ventilation duct V_{sr} [m/s], and the speed related to the effective area of the grille v_f [m/s].

v_{sr} - average speed in the ventilation duct



v_f - speed related to the effective area A_f



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
'MM'	- mounting place: 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.

QUICK SELECTION

Size LxH [mm]	Air flow [m3/h]	Pressure loss [Pa]	Sound power level [dB]
200x100	40-200	5-30	15-45
300x100	60-300		
200x200	90-450		
300x200	150-700		
400x200	200-950		
500x200	250-1200		
600x200	300-1500		
800x200	400-2000		
300x300	220-1100		
400x300	300-1500		
500x300	400-2000		
600x300	450-2300		
800x300	600-3000		
1000x300	750-3800		
400x400	400-2000		
500x400	500-2600		
600x400	620-3100		
800x400	850-4200		
1000x400	1000-5100		
500x500	650-3300		
600x500	800-4000		
800x500	1000-5300		
1000x500	1300-6500		
1200x500	1600-7900		
600x600	950-4800		
800x600	1300-6400		
1000x600	1600-7900		
1200x600	1900-9500		
800x800	1700-8600		
1000x800	2100-10600		