

Description and application

Raster grille are designed for gravity ventilation, low and medium pressure systems and air conditioning systems, mainly exhaust air. Designed for mounting on rectangular ventilation ducts, plenum boxes. Diffuser with a very large effective surface area to be used wherever necessary to ensure the comfort of a large air exchange. The air flow adjusted with a damper with counter running blades GP located directly behind the anemostat or single-leaf damper P on plenum box spigot.

Raster grille has Hygienic Certificate HK/K/0522/02/2016

Material and workmanship

Mesh grille KR-1 it's made of aluminum, and the frame is made of galvanized sheet steel - all powder coated colour white RAL 9016. On customer request frame can be made from aluminum and powder coated to any color from the RAL palette. The frame is made with a standard 25mm eversion which allows screwing grille to the ceiling or walls.

Size

Raster grille are produced on request according to the dimensions of the mounting hole LxH. Examples of dimensions according to the table.



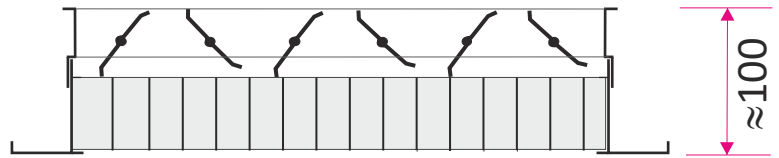
Technical data - Surface of effective area (sample size)

H \ L	125	225	325	425	525	625	825	1025	1225
mm	Aef (m ²) effective area								
75	0,007	0,013	0,018	0,024	0,030	0,036	0,048	0,059	0,071
125	0,012	0,022	0,033	0,043	0,053	0,064	0,084	0,105	0,125
225	0,022	0,041	0,061	0,080	0,099	0,118	0,157	0,195	0,234
325	0,033	0,061	0,087	0,117	0,145	0,173	0,229	0,285	0,342
425	0,043	0,080	0,117	0,154	0,191	0,228	0,302	0,376	0,450
525	0,053	0,099	0,145	0,191	0,237	0,283	0,375	0,467	0,559
625	0,064	0,118	0,173	0,228	0,283	0,338	0,447	0,557	0,667

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

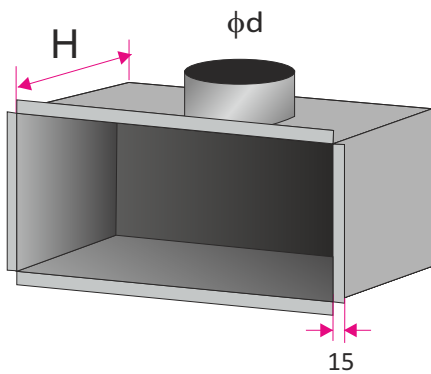
Accessories - damper with counter running blades GP

Raster grille can also be equipped with a damper with counter running blades, localized directly behind the mesh grille. Damper control is possible from the panel side, without disassembling the diffuser.

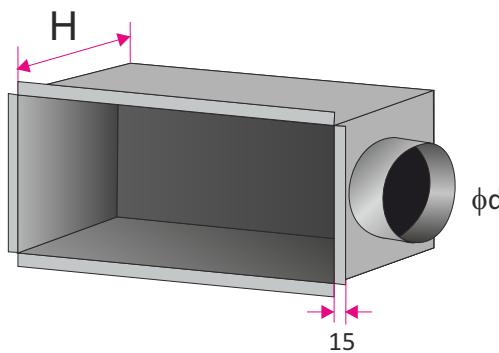


Accessories - plenum box

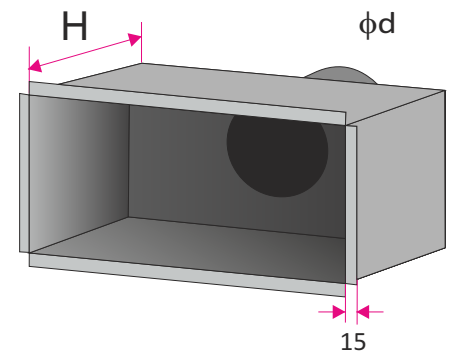
Plenum box is made of galvanized steel. On request it can be equipped with a damper control onto the connected spigot. The plenum box can be isolated inside with rubber (acoustic) or outside with mineral wool (thermal). In the standard height of the plenum box is adapted to size of the spigot or diffuser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



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



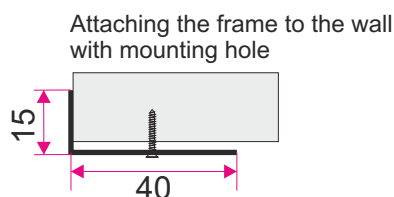
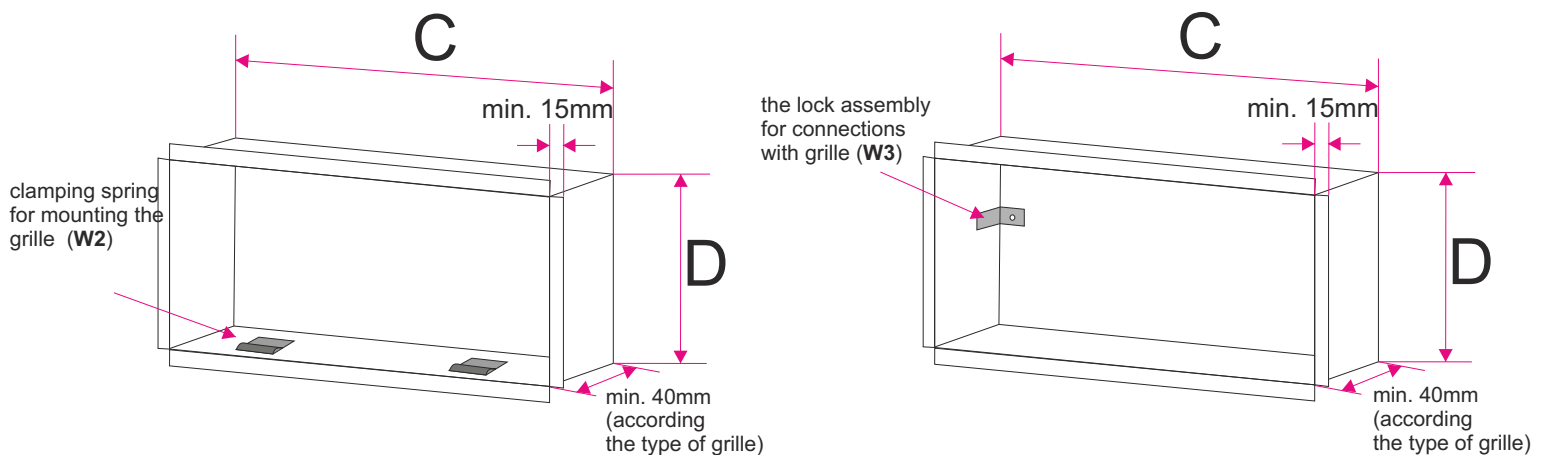
SR-Bw - plenum box with the spigot on the side



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

Accessories - 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.

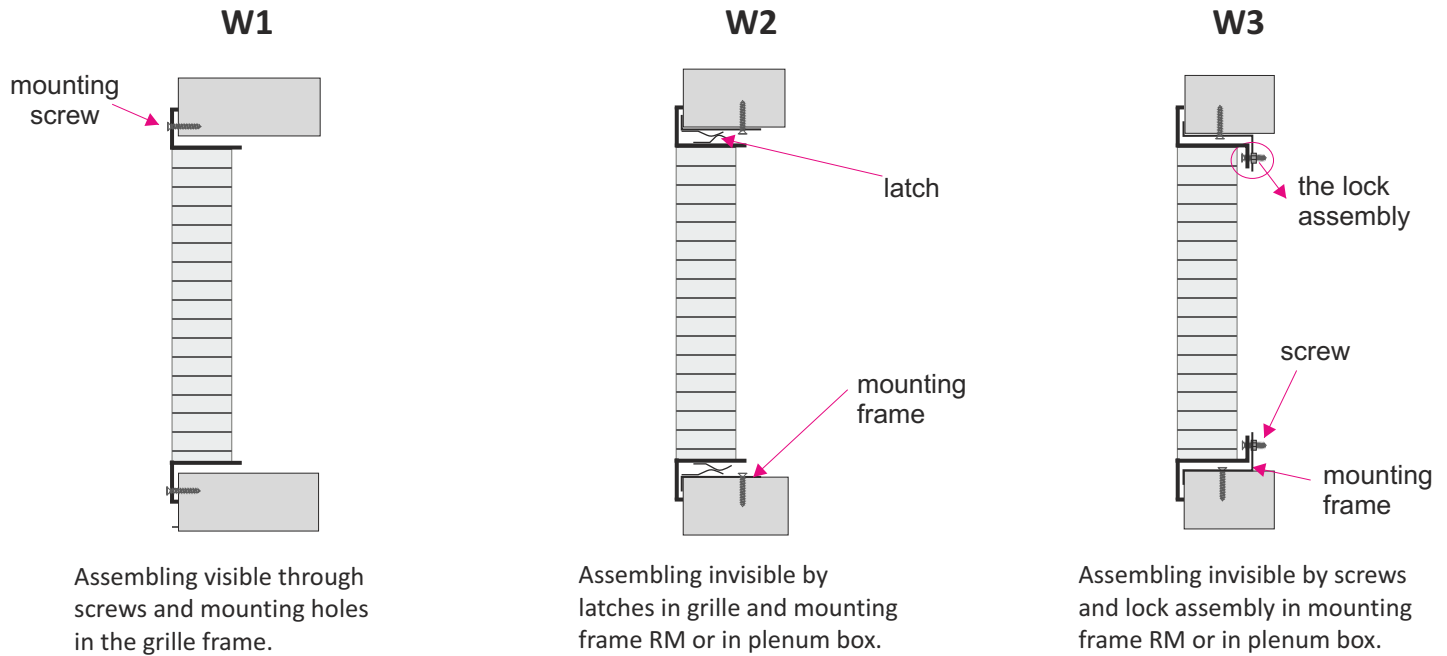


$$C = L-5$$

$$D = H-5$$

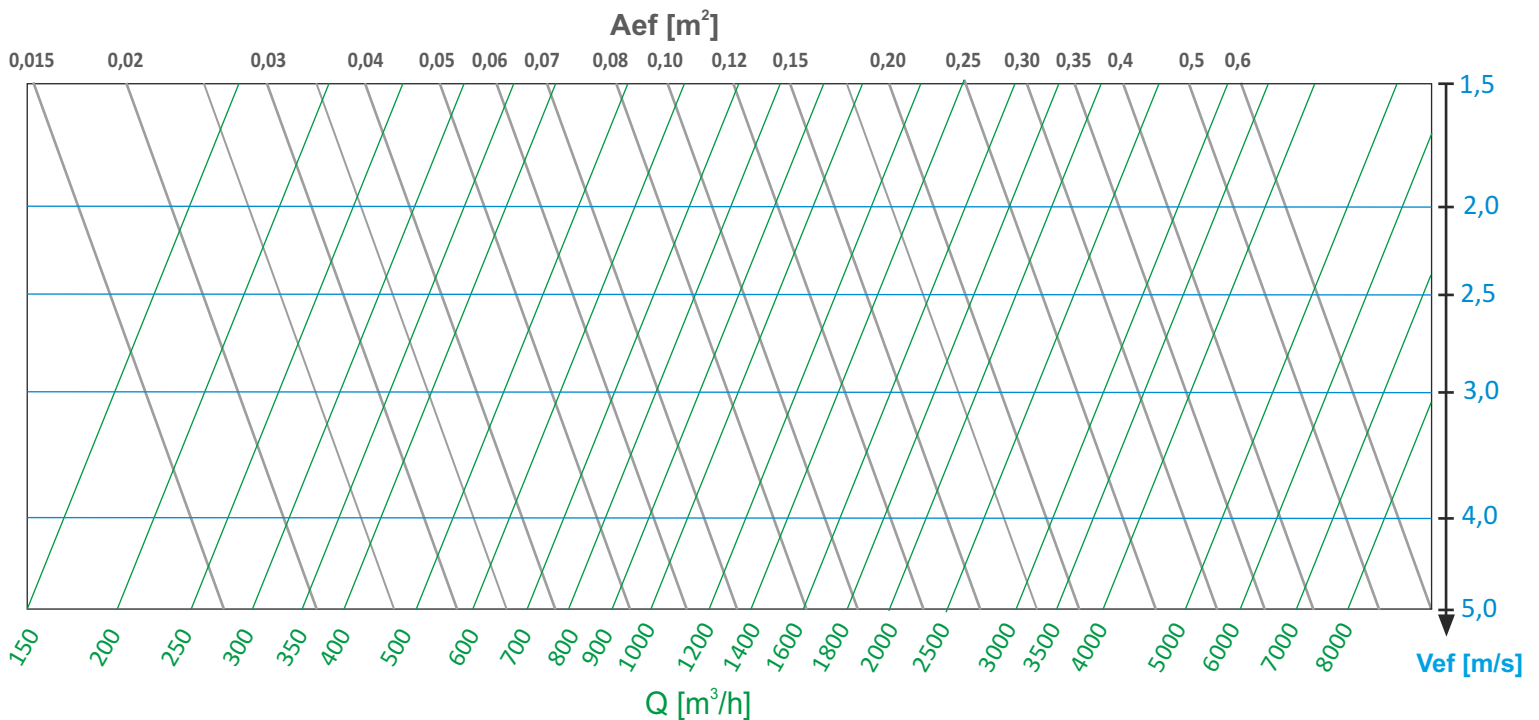
LxH - size of mounting hole

Methods of mounting



Technical data

Effective speed depending on the effective area and air volume flow



Marking:

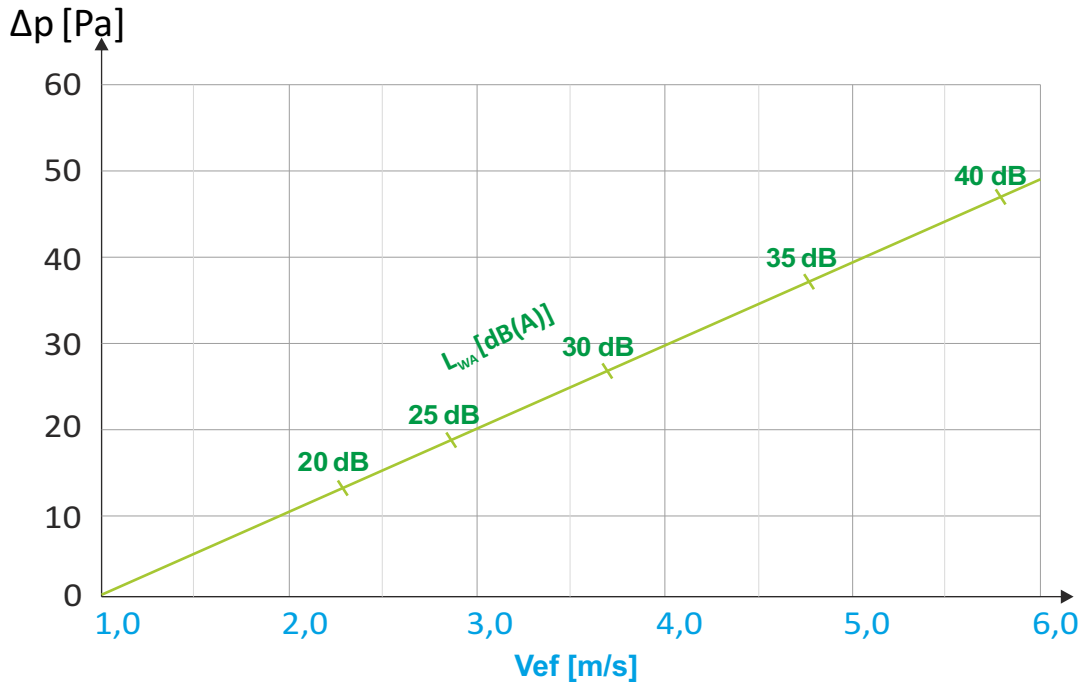
A_{ef} [m²]- effective area grille

Q [m³/h]- air volume flow

V_{ef} [m/s]- effective speed on the grille

Technical data continued

Pressure drop and acoustic power depending on the effective speed



Marking:

- V_{ef} [m/s]- effective speed on the grille
- L_{WA} [dB(A)]- acoustic power level
- ΔP [Pa]- pressure drop

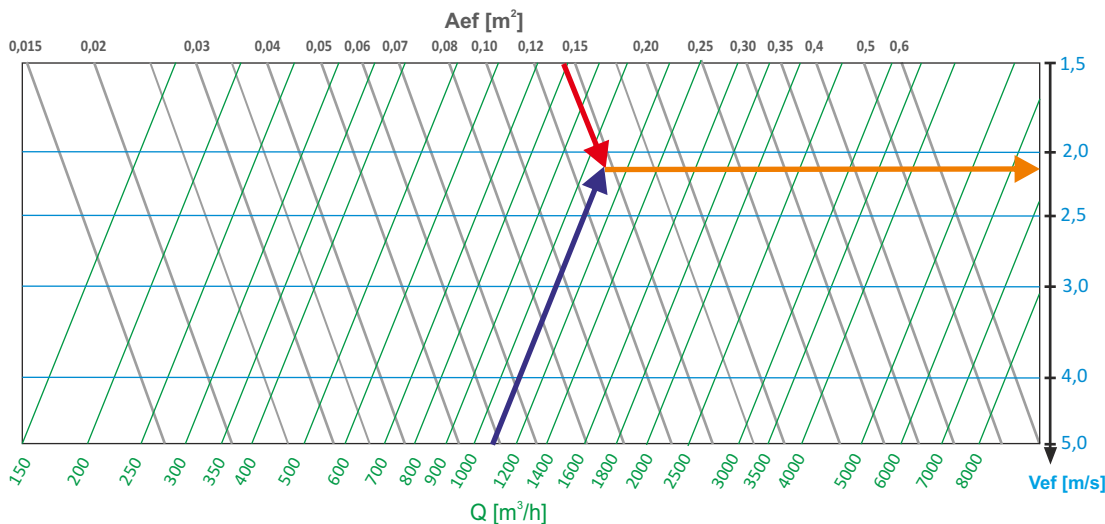
EXAMPLE

- air volume flow $Q=1100 \text{ m}^3/\text{h}$
- grille size: **525x325**

Reading the graph:

- effective area: $A_{ef} = 0,145 \text{ m}^2$

H \ L	125	225	325	425	525	625	825	1025	1225
mm	Aef (m ²) effective area								
75	0,007	0,013	0,018	0,024	0,030	0,036	0,048	0,059	0,071
125	0,012	0,022	0,033	0,043	0,053	0,064	0,084	0,105	0,125
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EXAMPLE

- effective area: $A_{ef} = 0,145 \text{ m}^2$

Reading the graph:

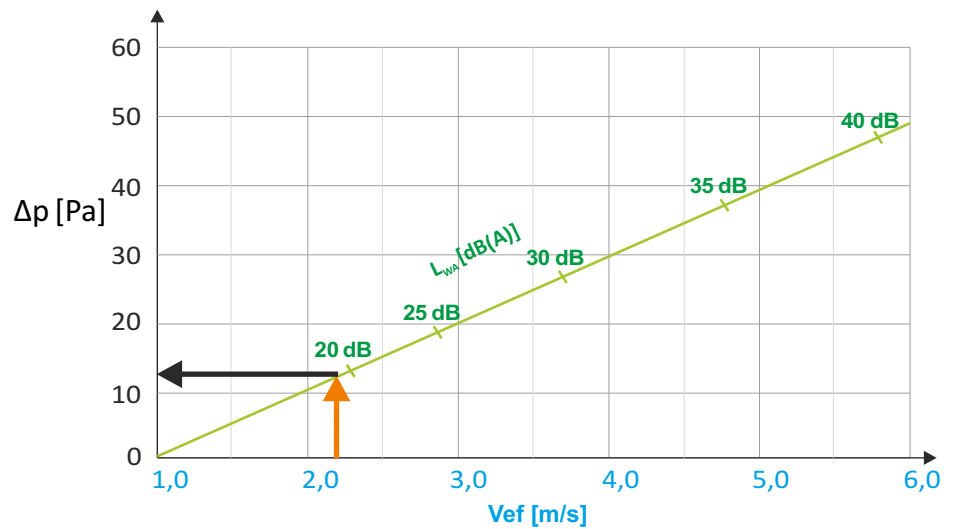
- effective speed: $v_{ef} = 2,2 \text{ m/s}$

EXAMPLE

- effective speed: $v_{ef} = 2,2 \text{ m/s}$

Reading the graph:

- acoustic power $L_{WA} = 20 \text{ dB}$
- pressure drop on grille $\Delta p = 13 \text{ Pa}$



The method of placing an order

Please make orders according to the following formula:

KR-1 / 'LxH' / 'RAL' / 'M' / 'W' + 'SR' / 'I' / 'P' / 'K' / 'H'

'LxH'	- size of mounting hole (width x height) in mm
'RAL'	- grille color according to RAL palette (standard RAL9016*)
'M'	- material ST-AL - frame: powder coated galvanized steel + mesh grille: aluminum* AL-AL - frame+mesh grille: aluminum powder coated
'W'	- mounting option: W1 - visible assembly on screw through the holes in front frame W2 - invisible assembly 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* 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.