

Description and application

Square swirl diffuser NWK - 1 on the square panel is used for ventilation and air conditioning industrial and public buildings with a height of 2.5 m - 4.5 m, such as offices, hotels, cinemas, conference rooms, supermarkets .

They are characterized by easy assembly in suspended ceilings, plenum boxes or directly on rectangular ducts.

Assembly is done using visible screws in the corners of the faceplate or using a central mounting. By appropriate location of the slots in the faceplate we get a swirling motion to the air flow.

Square swirl diffuser has Hygienic Certificate HK/K/0522/01/2016

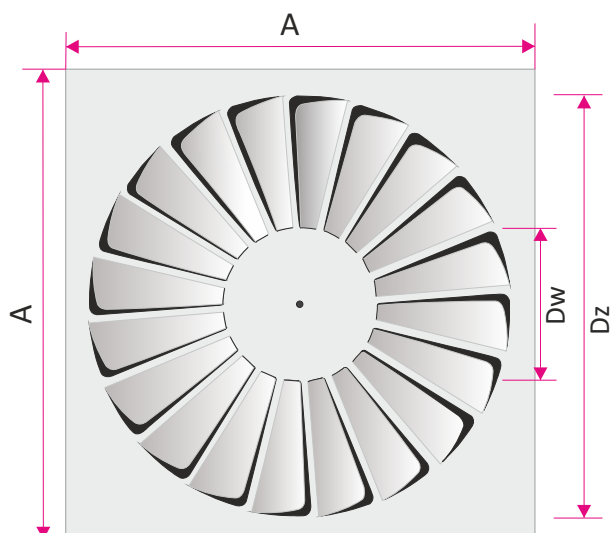
Material and workmanship

Diffusers are made of galvanized sheet steel powder coated, standard on the white color 9016. On request it is possible to make aluminum and stainless steel, as well as painting any color from the RAL palette.

The diffuser has a motionless blades. There is a possibility of production the diffuser on the modular plate.

Size

The diffusers are manufactured on order. Examples dimensions of the diffusers are given in the table.

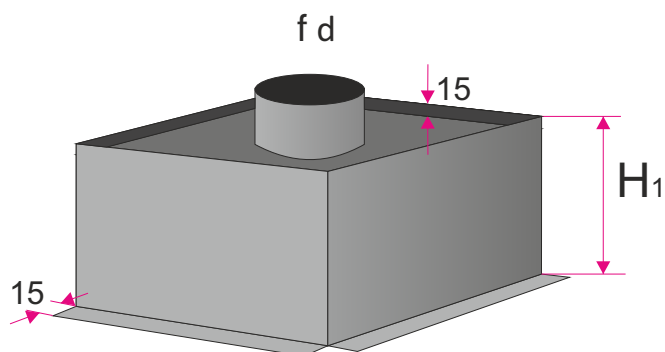


Size A	Dz	Dw
300x300	250	90
400x400	350	130
500x500	450	160
595x595	540	200
600x600	540	200
625x625	540	200

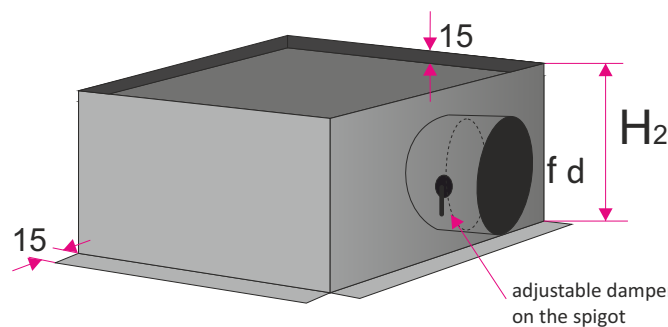
Accessories- plenum box

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).

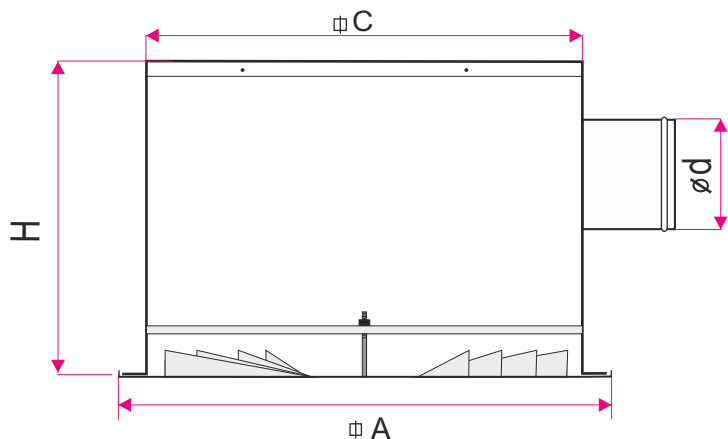


SR-Gc - Rectangular plenum box with the spigot on the top



SR-Bc - Rectangular plenum box with the spigot on the side

Accessories- plenum box (continuation)



Size A	C	H1	H2	f d
300x300	265x265	310	280	158
400x400	365x365	310	280	158
500x500	465x465	310	280	198
595x595	560x560	310	330	248
600x600	565x565	310	330	248
625x625	590x590	310	330	248
825x825	790x790	310	380	313

Other sizes are produced on customer request

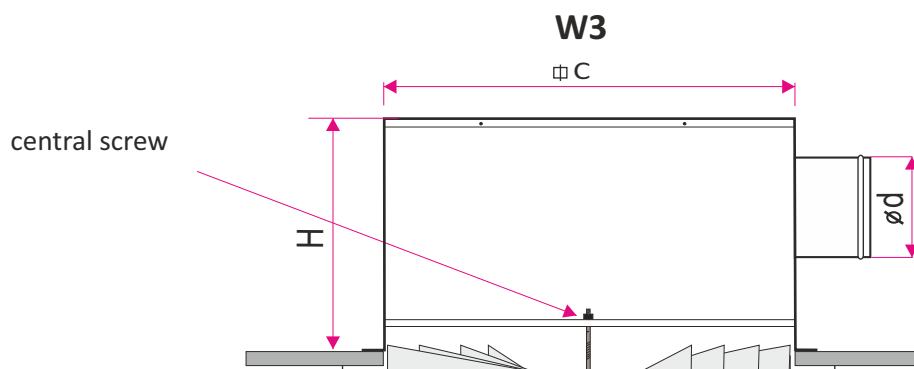
Methods of mounting



Assembly invisible on the construction of the suspended ceiling
 - diffuser panel 595x595
 - diffuser without mounting holes in the frame



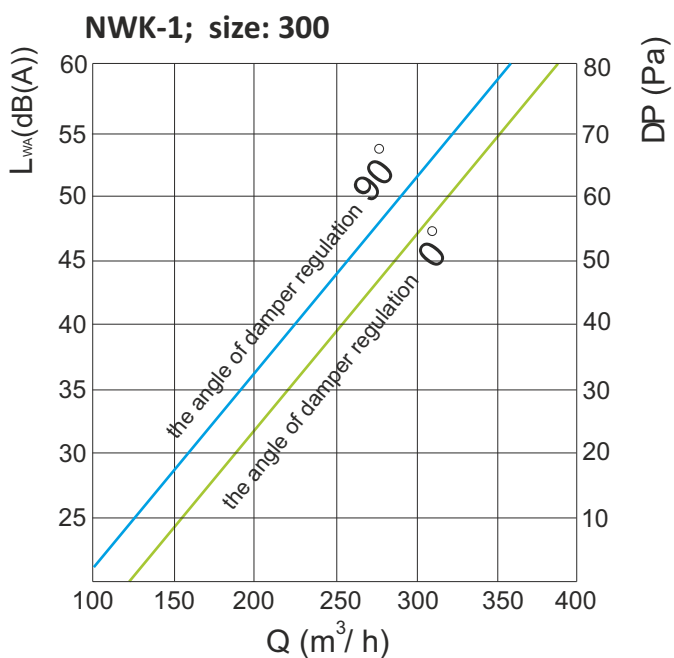
Assembly visible using screws and the mounting holes in the corners of diffuser faceplate.



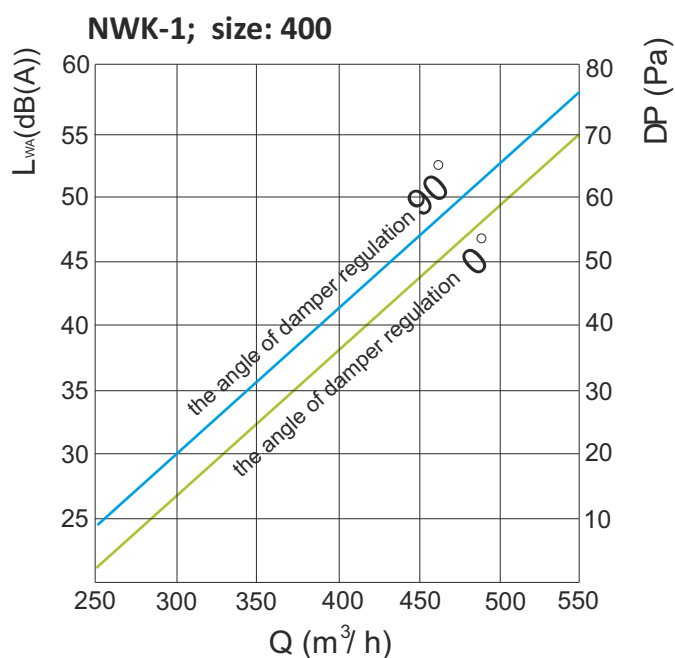
Central assembly through the crossbar (WMC) mounted in the plenum box and the central mounting screw.

Technical data

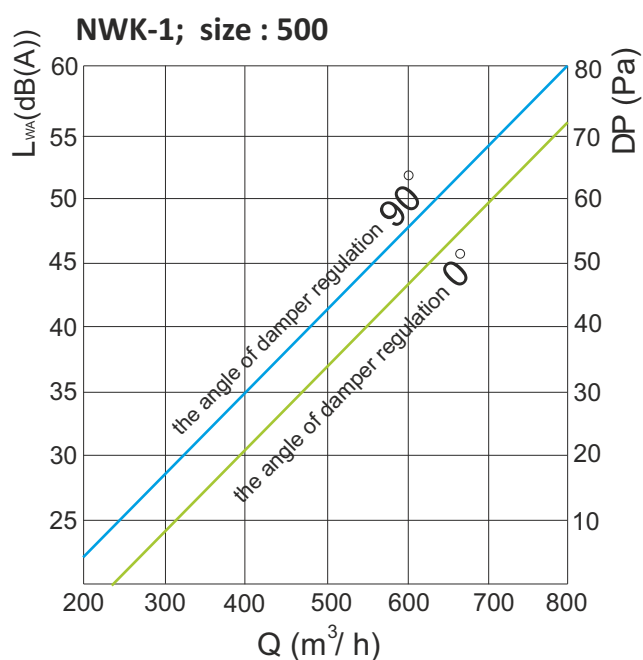
Pressure drop and acoustic power: **300**



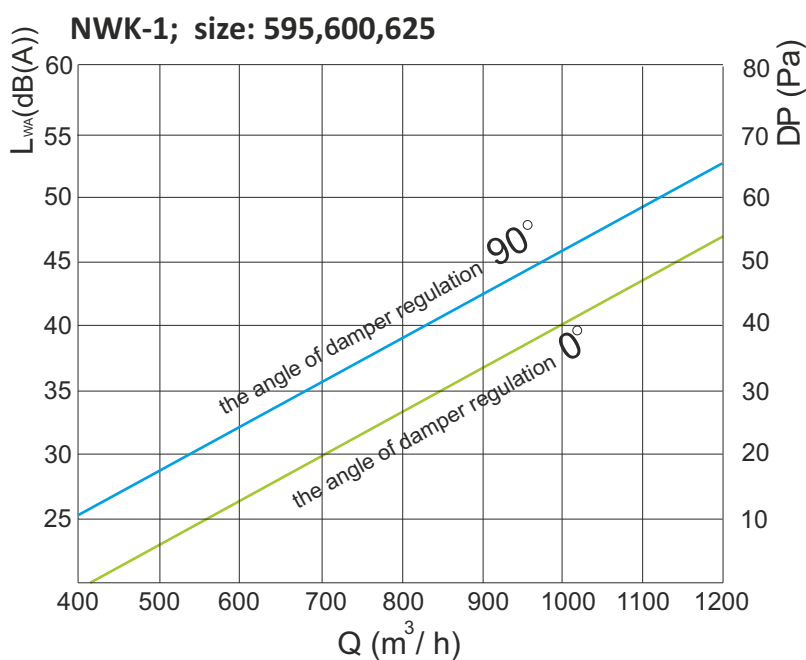
Pressure drop and acoustic power: **400**



Pressure drop and acoustic power: **500**



Pressure drop and acoustic power: **595,600,625**

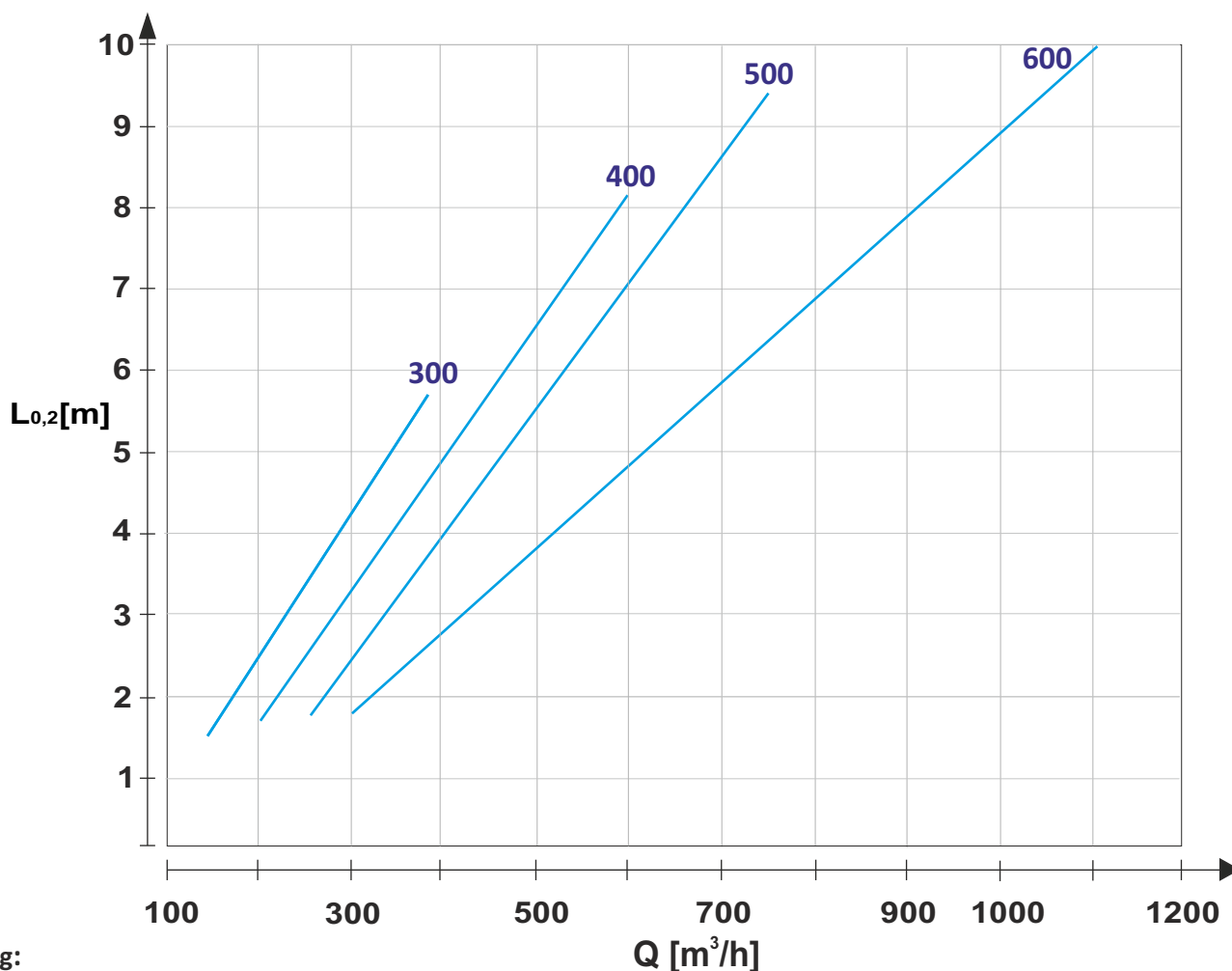


Marking:

- L_{WA}(dB(A)) - sound level
- Q (m³/h)- air volume flow
- DP (Pa) - pressure drop

Technical data

Dependence of range air flow $L_{0,2}$ [m] from air volume flow Q [m³/h]



Marking:

Q [m³/h]- air volume flow

$L_{0,2}$ [m]- stream range with final velocity 0,2 m/s

EXAMPLE

EXAMPLE (for size 600x600)

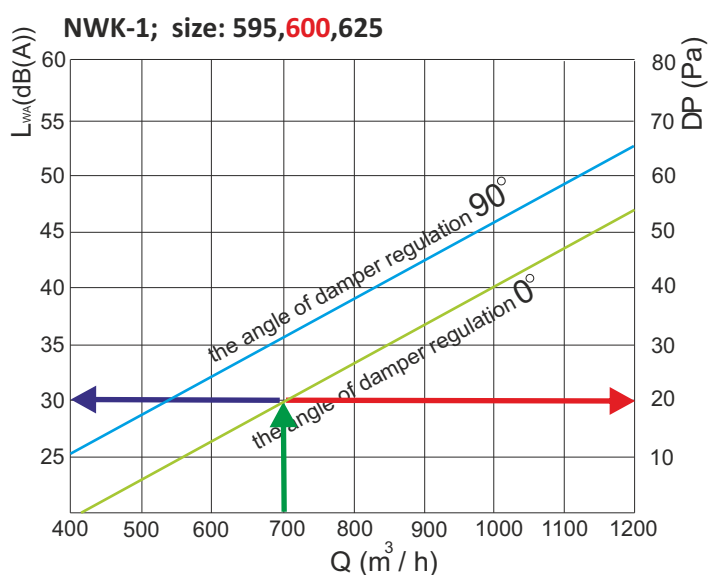
- efficiency of the diffuser $Q=700$ m³/h

Reading the graph:

For the damper fully open (0°)

- acoustic power $L_{WA} = 30$ dB

- pressure drop $\Delta p = 20$ Pa

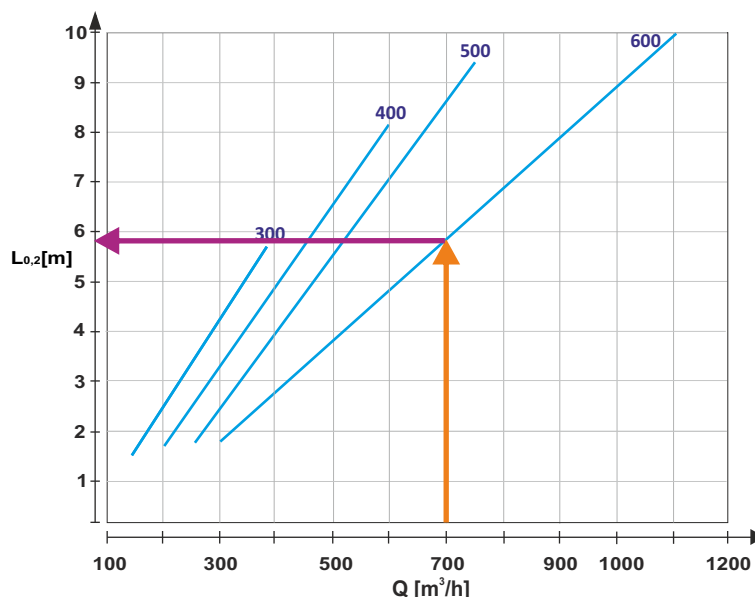


EXAMPLE

- efficiency of the diffuser $Q=700 \text{ m}^3/\text{h}$

Reading the graph:

- stream range $L_{0,2}=5,8\text{m}$



The method of placing an order

Please make orders according to the following formula:

- 'N' the size of the diffuser: **300, 400, 500, 600, 625**
- 'RAL' diffuser 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 - assembly invisible on the construction of the suspended ceiling
W2 - visible assembly with screws
W3 - the central assembly using the crossbar (in plenum box)
- 'SR' plenum box:
SR-Gc - plenum box with top spigot connection
SR-Bc - plenum box with side 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.