

Description and application

Round swirl diffusers NWO-1 are used for ventilation and air conditioning, industrial and utilities the public with a height of 2.5 m - 4.5 m, such as offices, hotels, cinemas, conference rooms, supermarkets. They are characterized by easy installation on suspended ceilings, plenum boxes and directly to round ducts. Assembly is done using visible screws on the edge 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.

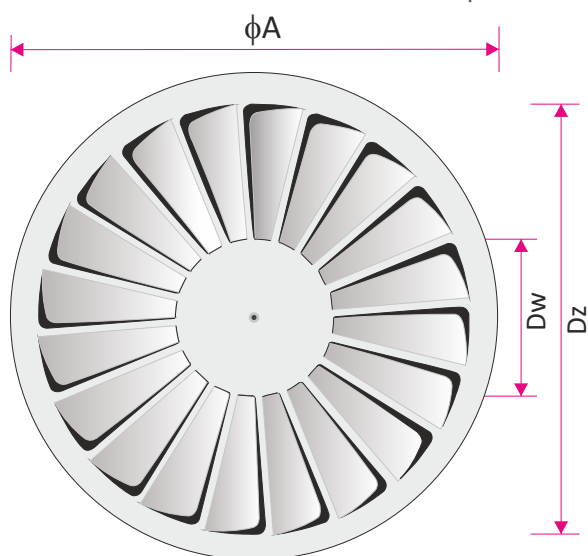
Round swirl diffuser has Hygienic Certificate HK/K/0522/01/2016

Material and workmanship

Diffusers are made of galvanized sheet steel powder coated, standard on the white color 9016 or on request to any color from the RAL palette and special execution of aluminum. The diffuser has a motionless blades.

Size

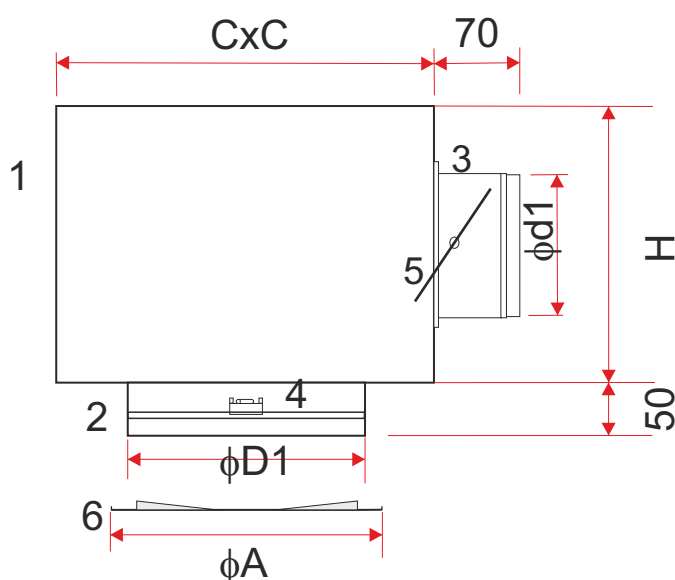
The diffusers are manufactured on order. Examples dimensions of the diffusers are given in the table.



Size ϕA	Dz	Dw
300	250	90
400	350	130
500	450	160
600	540	200
625	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).



Size A	C	H	$\phi d1$	$\phi D1$
300	395	280	158	295
400	495	330	248	395
500	595	380	313	495
600	695	380	313	595
625	720	595	398	620

Other sizes are produced on customer request

1. Plenum box
2. Connected spigot
3. Air intake spigot
4. Crossbar
5. Adjustment damper
6. Round swirl diffuser NWO-1

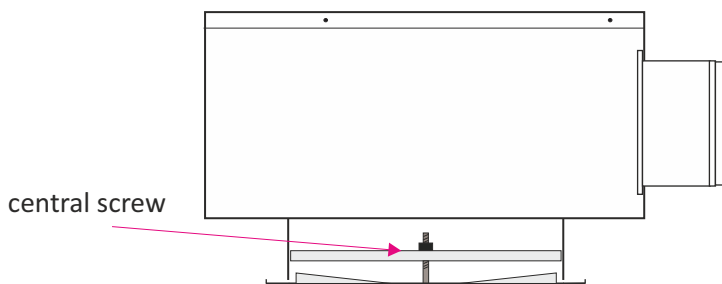
Methods of mounting

W1



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

W2

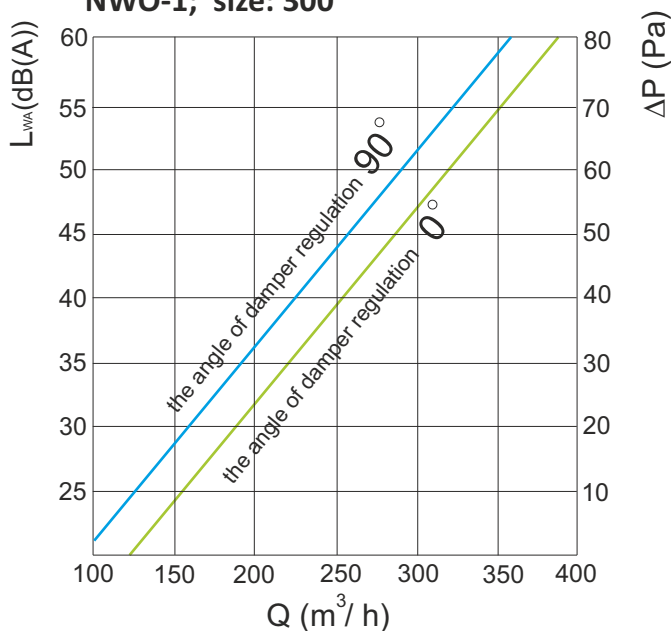


Central assembly through the crossbar (WMC) mounted in the plenum box and the central mounting screw.

Methods of mounting

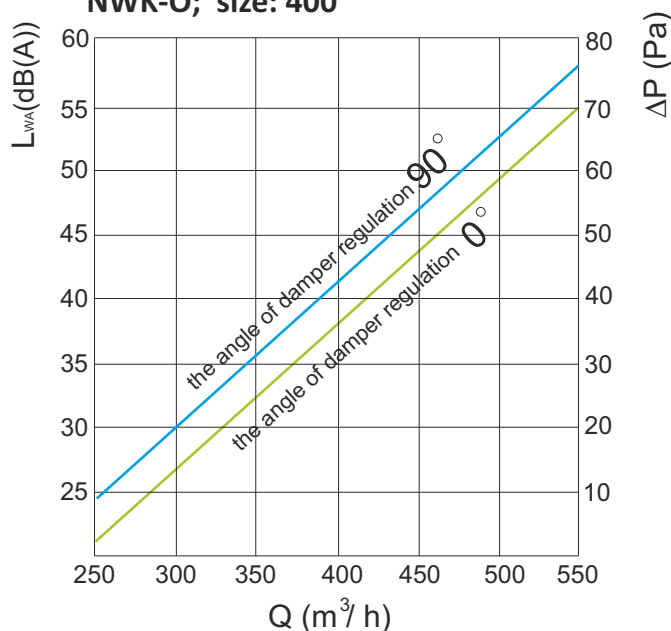
Pressure drop and acoustic power: **300**

NWO-1; size: 300



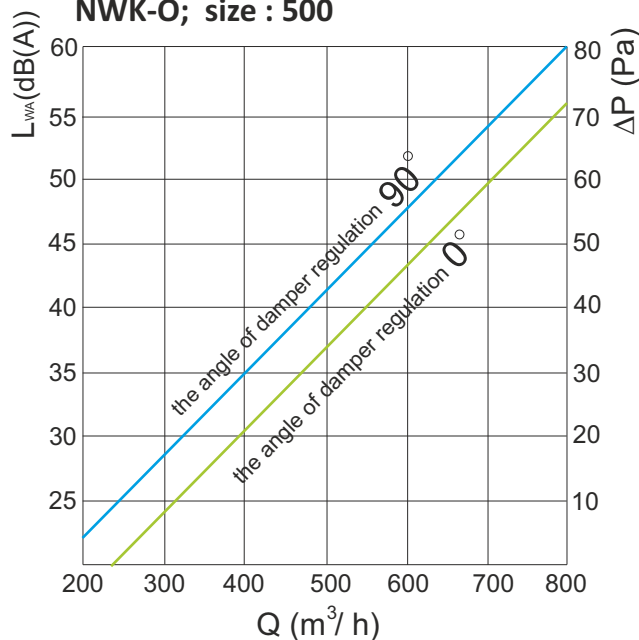
Pressure drop and acoustic power: **400**

NWK-O; size: 400



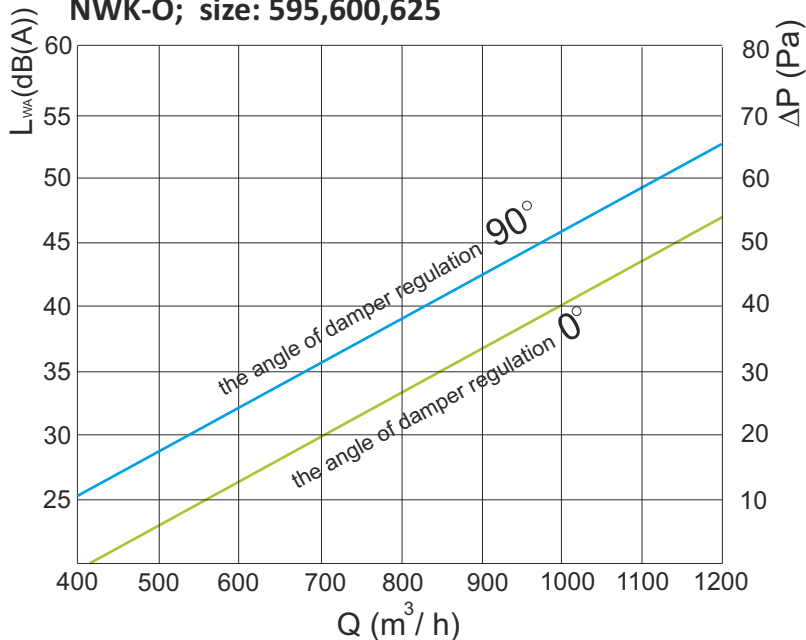
Pressure drop and acoustic power: **500**

NWK-O; size : 500



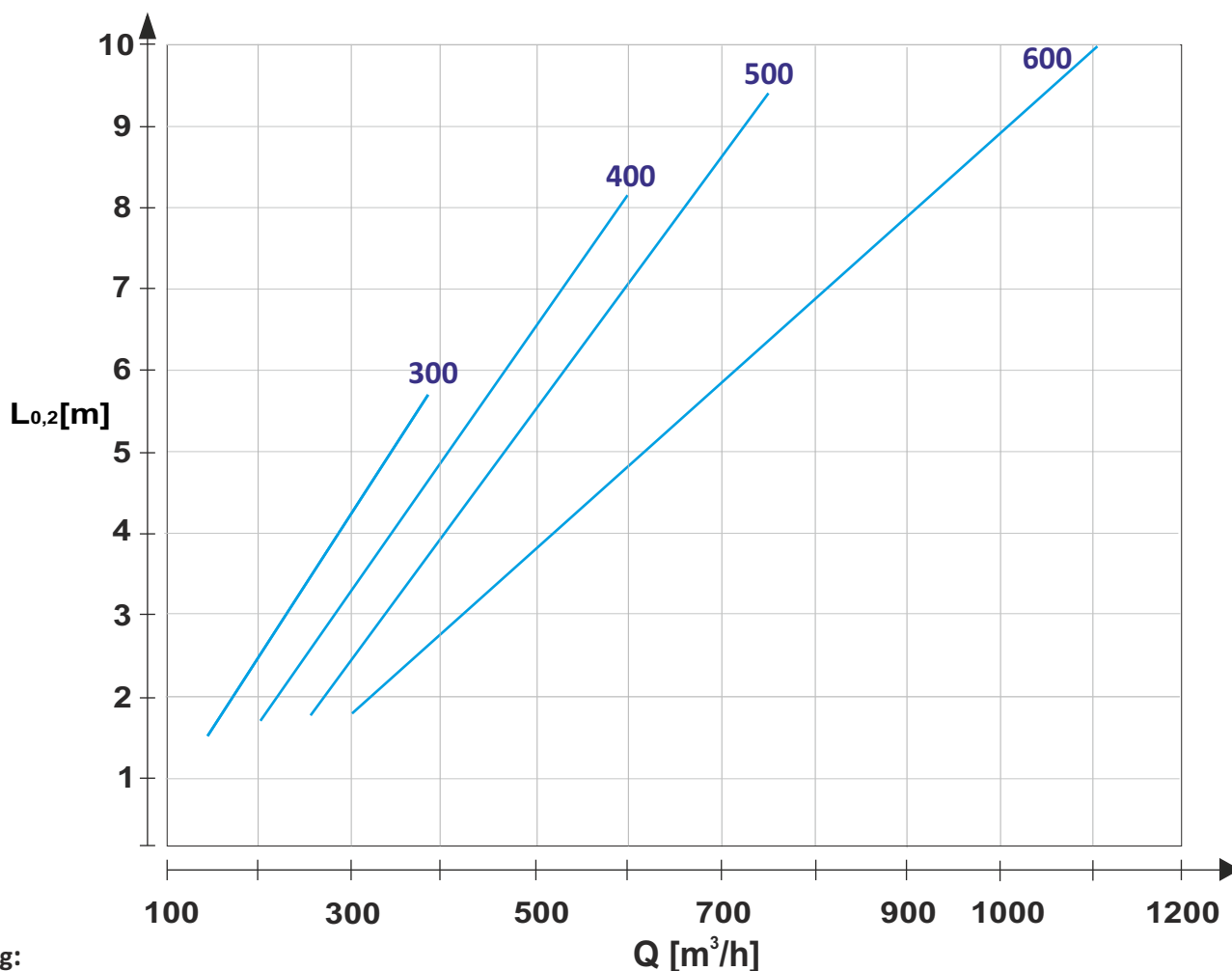
Pressure drop and acoustic power: **595,600,625**

NWK-O; size: 595,600,625



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 $\phi 600$)

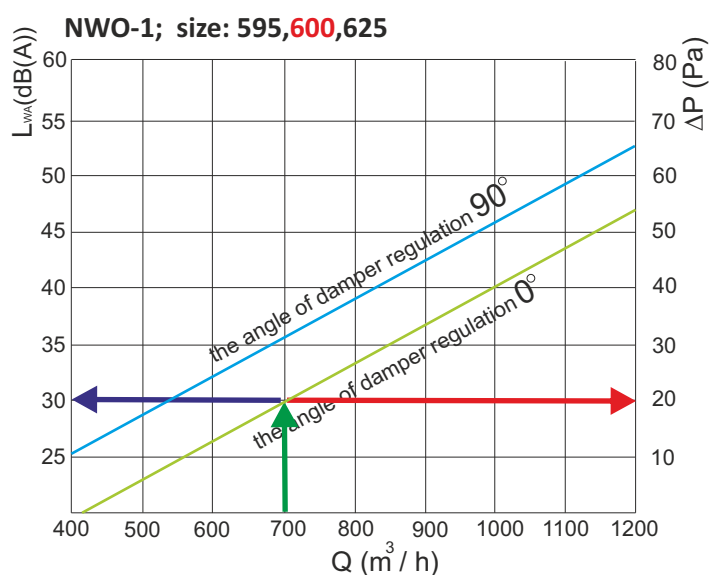
- efficiency of the diffuser $Q=700$ m³/h

Reading the graph:

For the damper fully open (0°)

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

- pressure drop $\Delta p = 20$ Pa

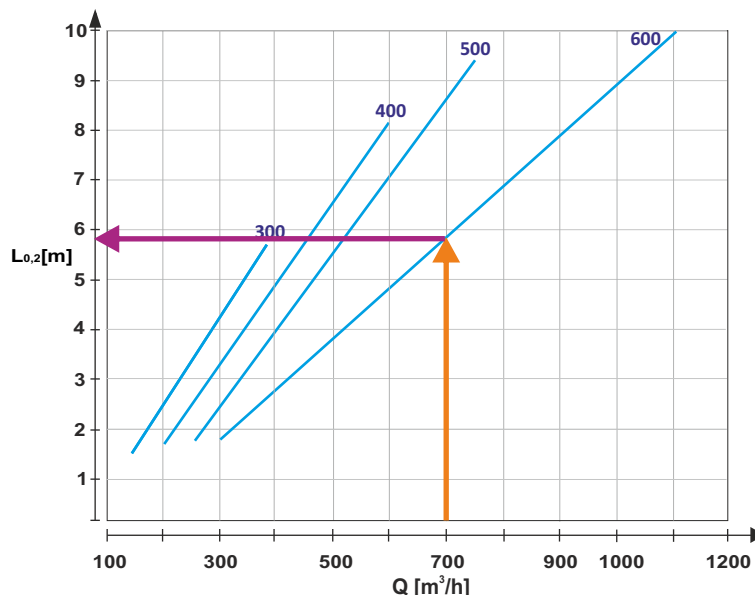


EXAMPLE

- 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:

NWO-1 / 'N' / 'RAL' / 'M' / 'W' + 'SR' / 'I' / 'P' / 'K' / 'H'

- '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 - visible assembly with screws
W2 - the central assembly using the crossbar (in plenum box)
- 'SR' plenum box:
SR-G2 - plenum box with top spigot connection
SR-B2 - 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.