

Description and application

Round displacement flow diffuser NW are used in industrial facilities or public utility, in places where there is a need to bring a large amount of fresh air. The air is supplied at low speed from 0.3 m/s to 1.5 m/s near of the workstations and the occupied zone. The entire surface of the diffuser blowing air has a low turbulence, easily displaces the used air from the work area or occupied zone in the extract air openings. Installation at a height of 3 m to 10m. Diffusers can be free-hanging - mounted directly to the ventilation duct or at wall - additionally attached to a wall or column. Diffuser NWJ-2 is recommended especially in areas with strong air pollution, where in cooling mode (raised rings) we get an appropriate supply of low turbulence.

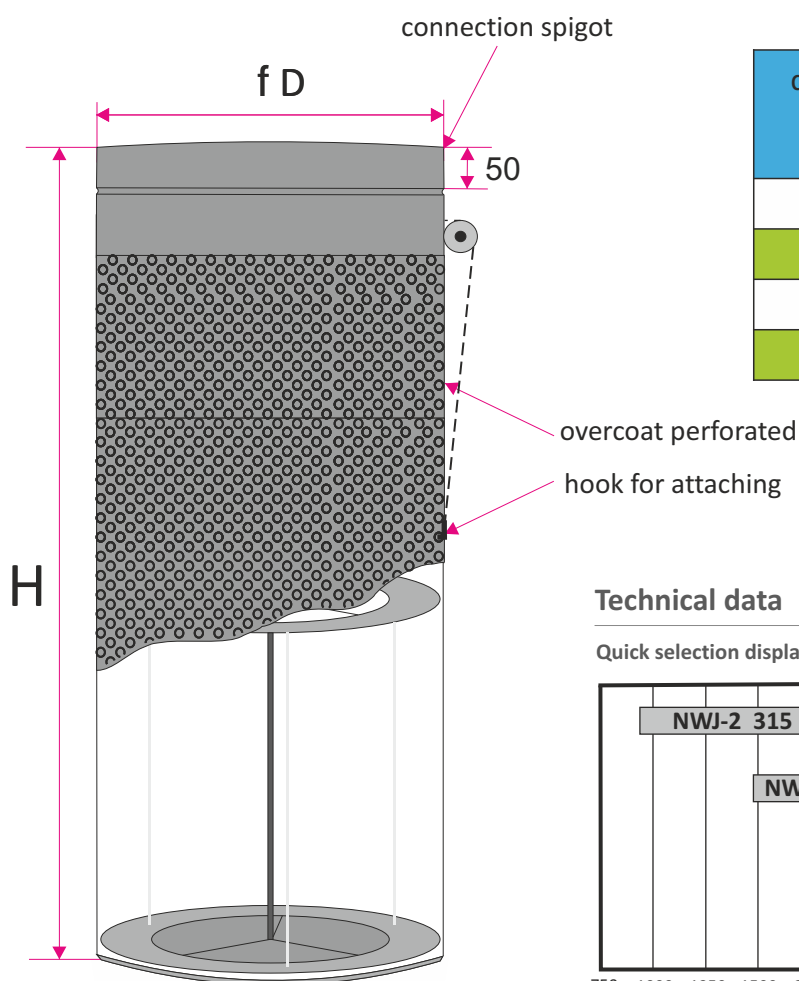
Displacement flow diffuser has Hygienic Certificate

Description and application

Diffusers are available in three material variants: galvanized steel, aluminum - powder coated or stainless steel (type 1.4301 or 1.4404). On customer request powder coated to any color from the RAL palette. NWJ-2 is designed for mounting directly onto round ducts. Inside the diffuser there are two rings (that change airflow direction)- set manually using pull rope. The manufacturer reserves the right to make technological changes.

Size

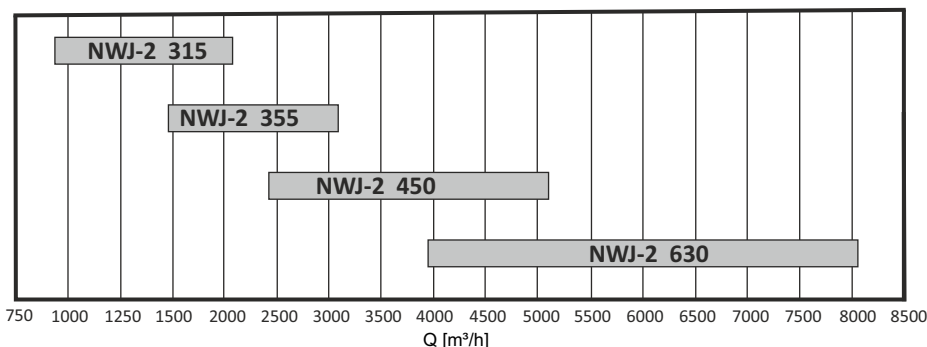
The dimensions according to the table in product details or to individual order.



diffuser type	f D [mm]	Height H [mm]
315	318	850
355	358	850
450	453	850
630	633	1050

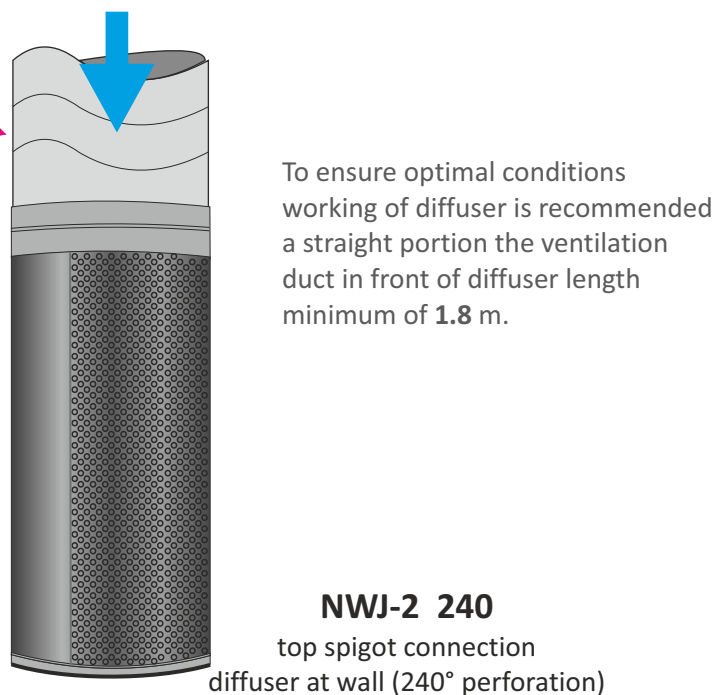
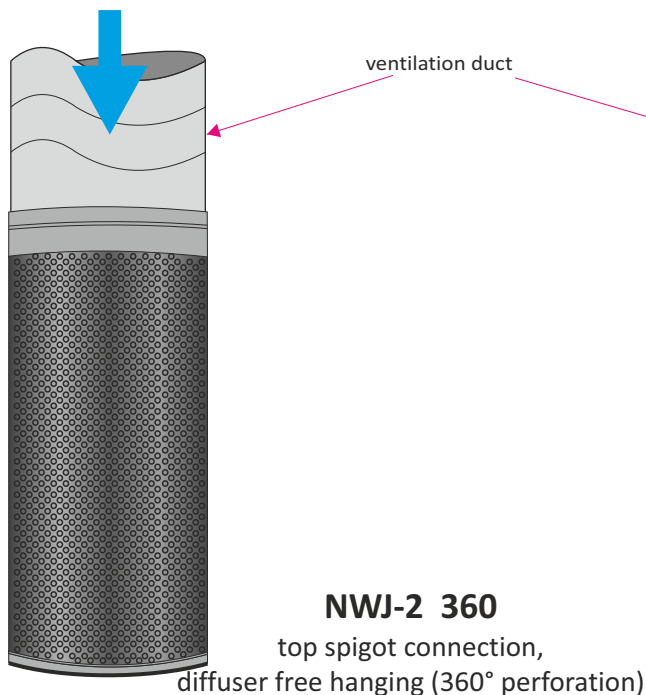
Technical data

Quick selection displacement diffuser NWJ-2



Variants realization / location

Diffusers can be divided due to the installation location at hanging and at wall (2/3 perimeter perforation).

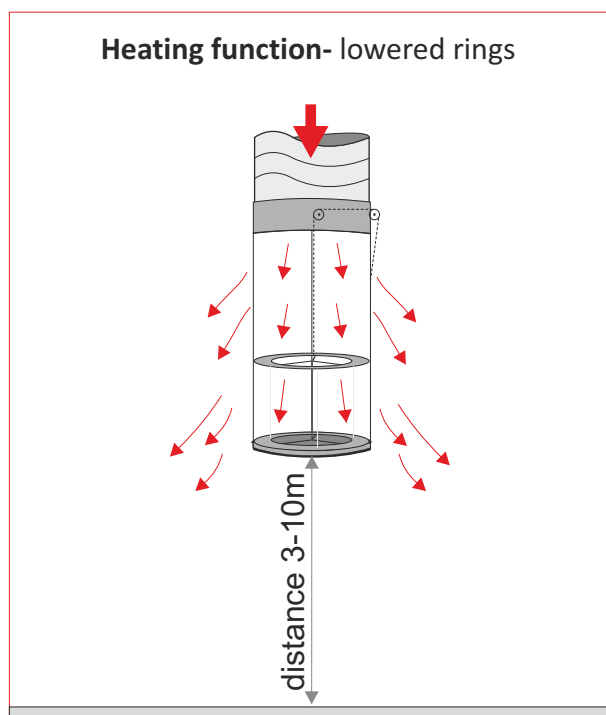
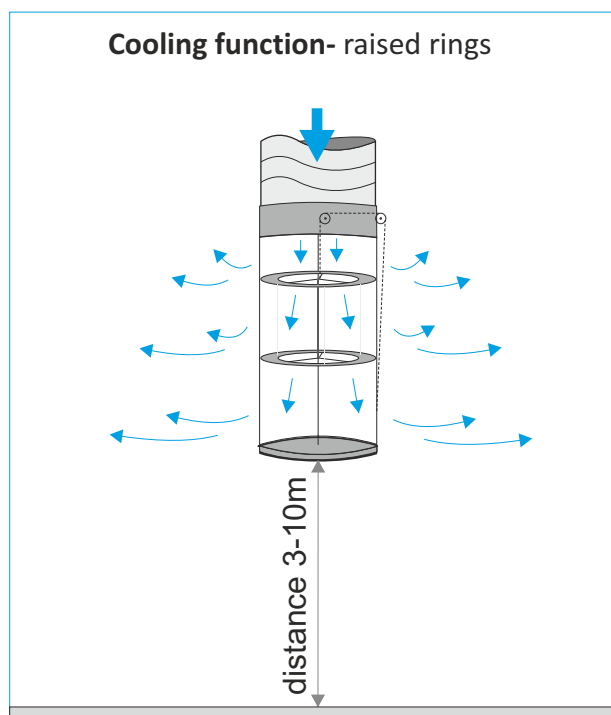


Specification - air flow regulation

In the case of displacement flow diffusers NWJ-2 it is possible to adjust the air flow direction, especially important it is when diffuser working in functions both heating and cooling. Rings, which are mounted inside diffuser, are responsible for changing the air flow. Adjustment the rings can be manual - from the outside with the pull rope (length of rope is adapted to mounting height) or by a actuator.

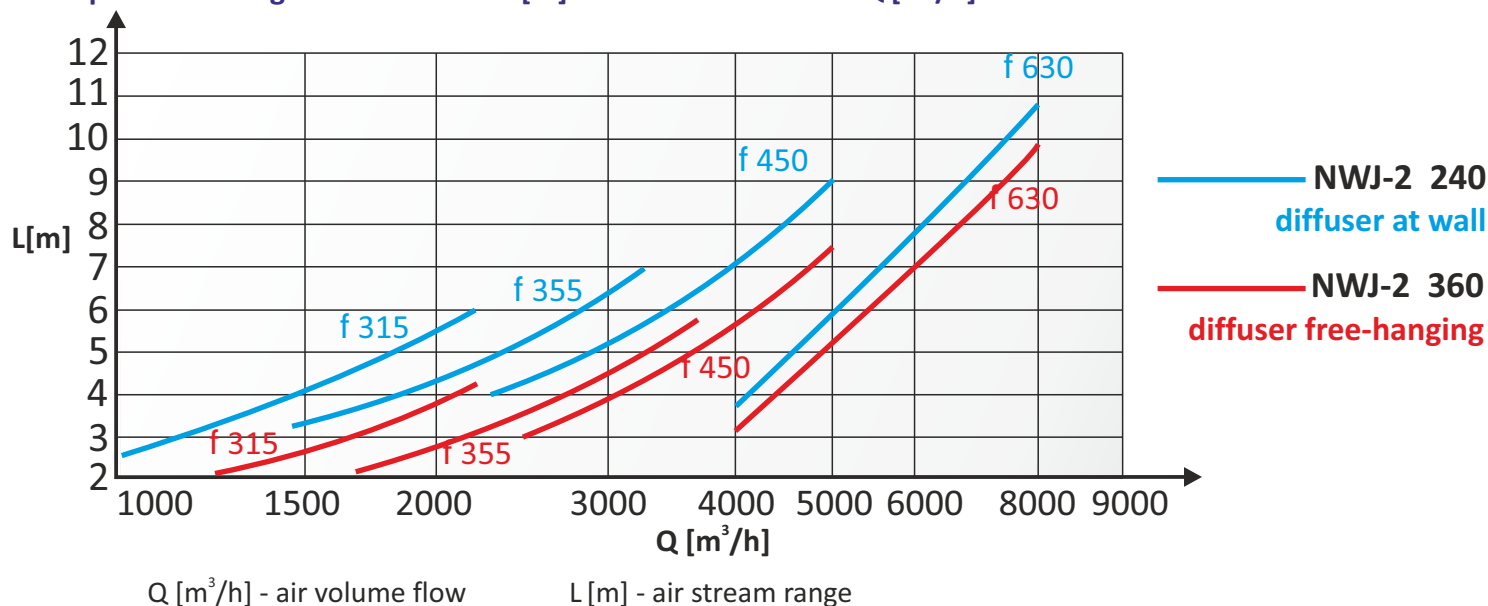
Use - Flow diagram of the air in room

The recommended range of temperature difference is -8K to +12K.

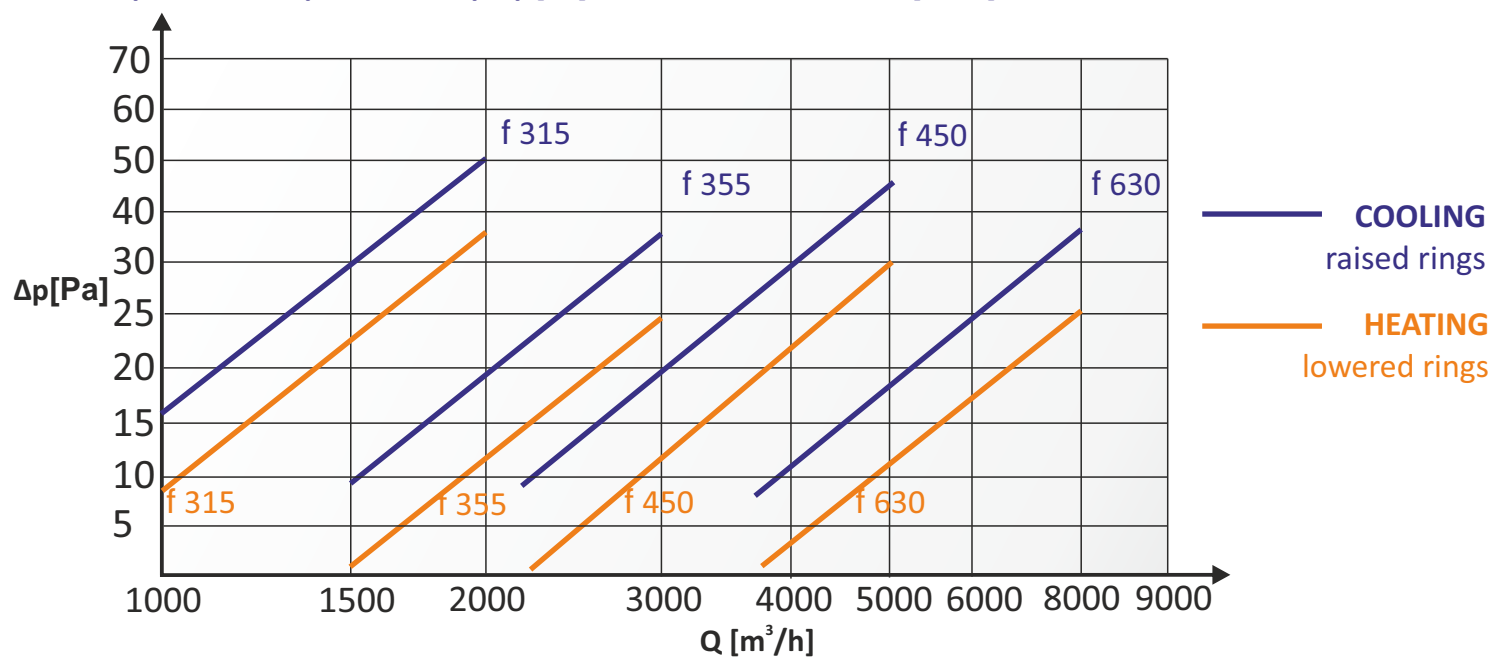


Technical data

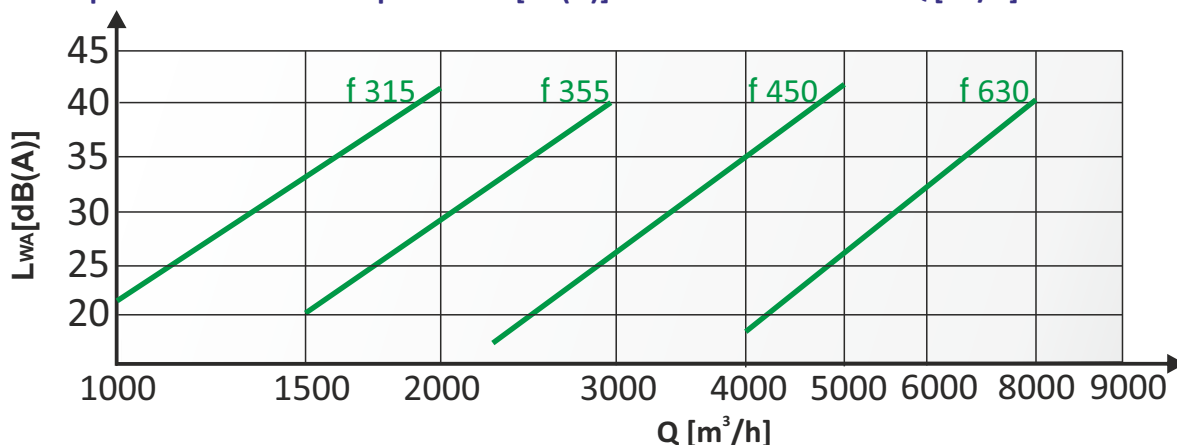
Dependence range the air stream L [m] from air volume flow Q [m³/h]



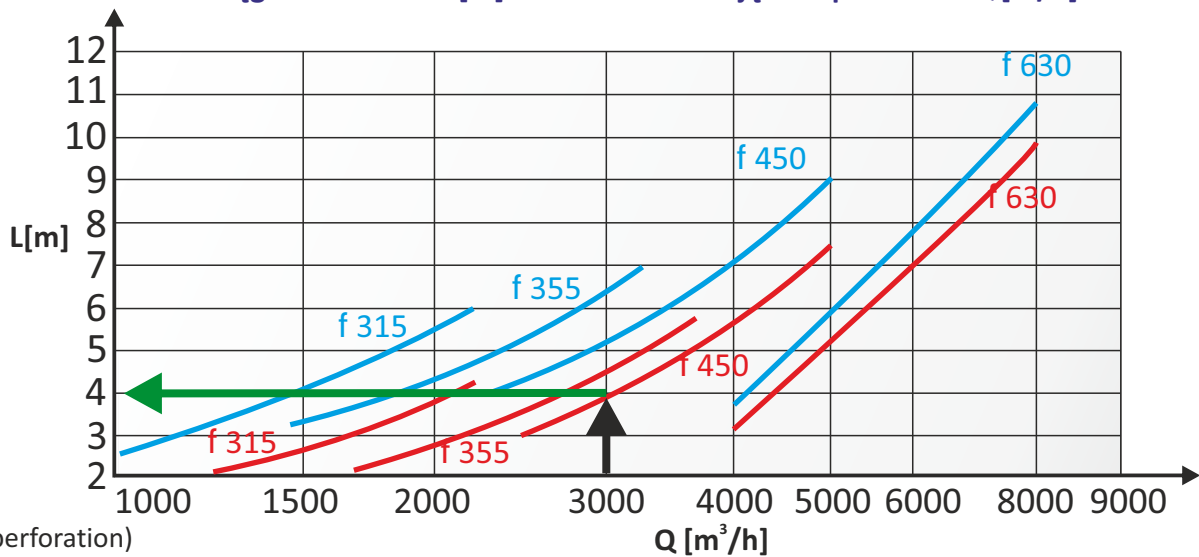
Dependence of pressure drop Δp [Pa] from air volume flow Q [m³/h]



Dependence of acoustic power L_{wa} [dB(A)] from air volume flow Q [m³/h]



Zależność zasięgu strumienia L [m] od strumienia objętości powietrza Q [m³/h]



EXAMPLE

- free-hanging diffuser (360° perforation)
- air volume flow $Q=3000$ m³/h
- appropriate diffusers: $\phi=450$

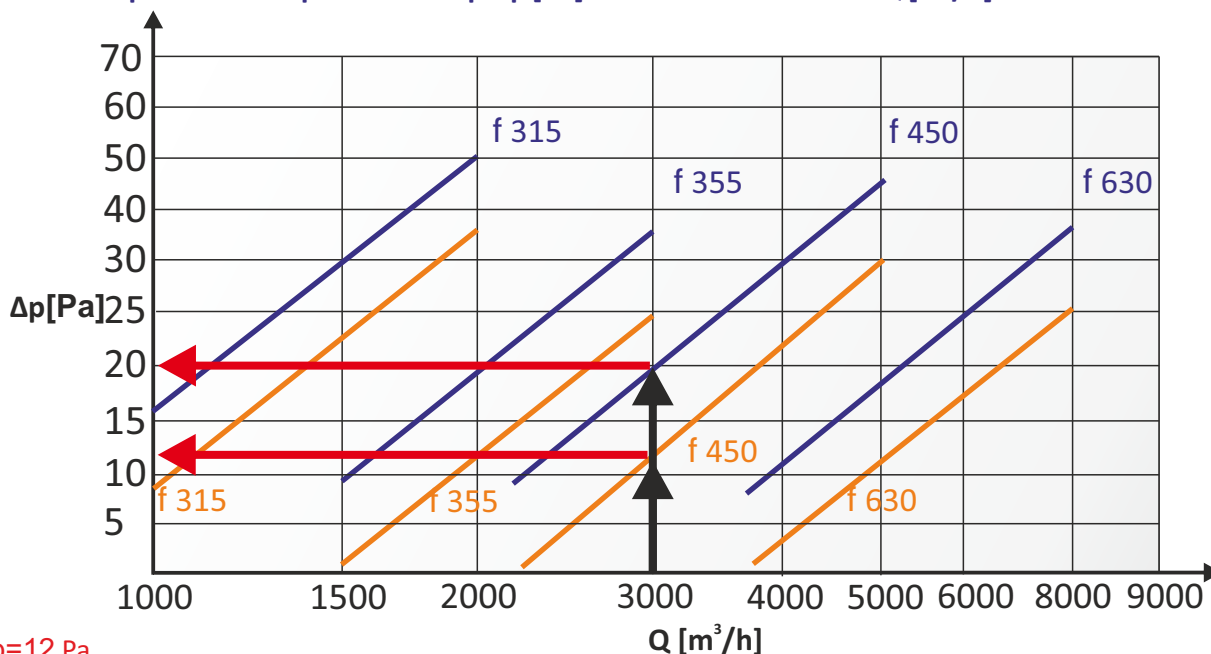
Reading from the graph:

- range of air stream $L=4$ m

Q [m³/h] - air volume flow

L [m] - air stream range

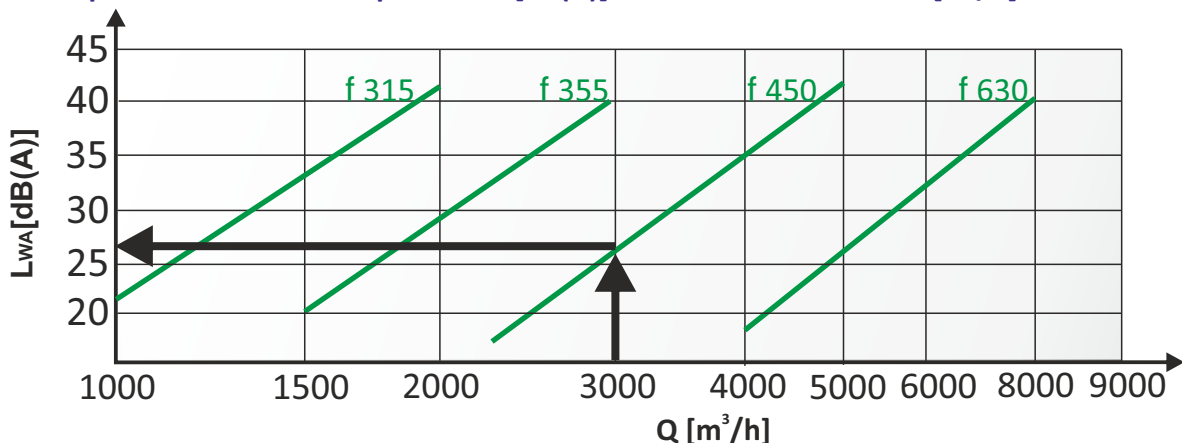
Dependence of pressure drop Δp [Pa] from air volume flow Q [m³/h]



Reading from the graph:

- pressure drop (heating) $\Delta p=12$ Pa
- pressure drop (cooling) $\Delta p=20$ Pa

Dependence of acoustic power L_{WA} [dB(A)] from air volume flow Q [m³/h]



Reading from the graph:

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

The method of placing an order

Please make orders according to the following formula:

NWJ-2/ 'W' / 'P' / 'K' / 'f d' / 'H' / 'RAL' / 'M'

'W'	- Variants realization / location: 1 - round diffuser free-hanging (perforation 360°) 2 - round diffuser at wall (perforation 240°)
'P'	Air flow regulation: RR - manual adjustment using the pull rope * RS - adjusting by electric actuator Belimo (not included)
'K'	- position of connection spigot: G - spigot from top *
'f d'	- diameter of diffuser connection spigot 200, 250, 315, 355, 450, 630...
'H'	- height of the diffuser *
'RAL'	- diffuser color RAL
'M'	- material: OC - galvanized steel powder coated AL - aluminum powder coated KO - stainless steel (type 1.4301 or 1.4404)

* - If you don't give the information will be used standard parameters.