Round displacement flow diffuser NWJ-P single-coat

Description and application

Round displacement flow diffuser enable the effective and efficient removal of pollutants from the production areas and work zones, without any mixing it with clean supply air. Depending on the the type and characteristics of produced pollution and heat load diffusers are mounted on the floor or above the production zone. Round displacement flow diffuser with adjustable air damper NWJ-P are also adapted for installation above the occupied zone by the people. Thanks to the built damper, the direction of the air flow can be adjusted from vertical to horizontal. This allows you to get the perfect flow of air in rooms, depending on different heat gains.

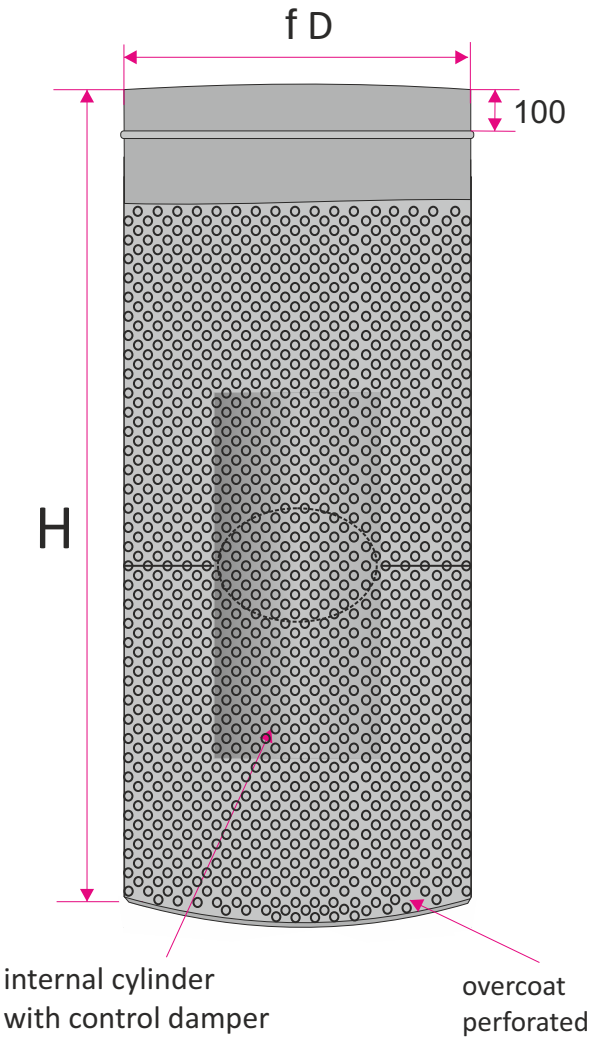
Displacement flow diffuser has Hygienic Certificate

Material and workmanship

The diffusers are made of single coating perforated sheet, powder coated agreed to RAL color. Spigot supply and diffuser pedestal are made of galvanized steel sheet, also powder coated in a chosen RAL color. NWJ-P is designed for mounting directly onto round ducts. Inside the diffuser is damper that change airflow direction. The diffuser can also be made from aluminum and stainless steel acid-resistant (type 1.4301 or 1.4404).The manufacturer reserves the right to make technological changes.

Size

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

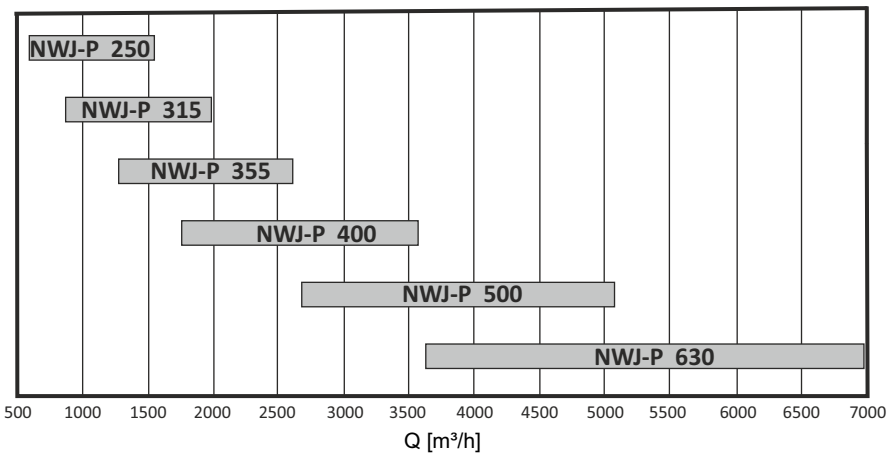


The table contains example sizes - the ability to modify according to customer needs

Diffuser type	f D mm	Height H mm
250	253	900
315	318	900
355	358	1200
400	403	1200
500	503	1200
630	633	1200
800	803	1200

Technical data

Quick selection displacement diffuser NWJ-P



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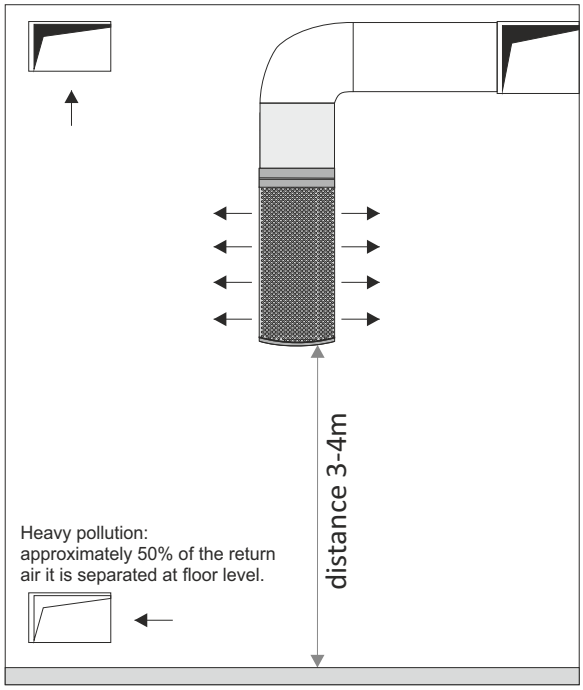
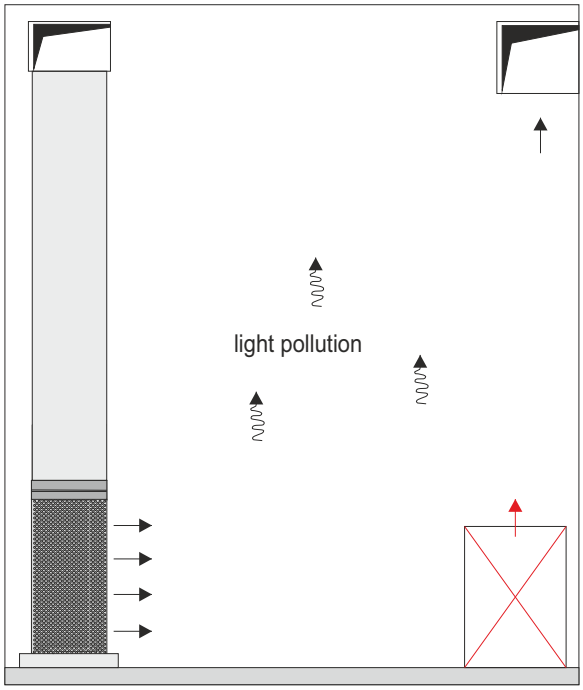
Variants realization / location

Diffusers can be divided due to the installation location: standing and hanging. Installation of the diffuser over the zone of work or closer to the floor depends on both type of pollution, which should be throw away and the desired amount of heat gains.

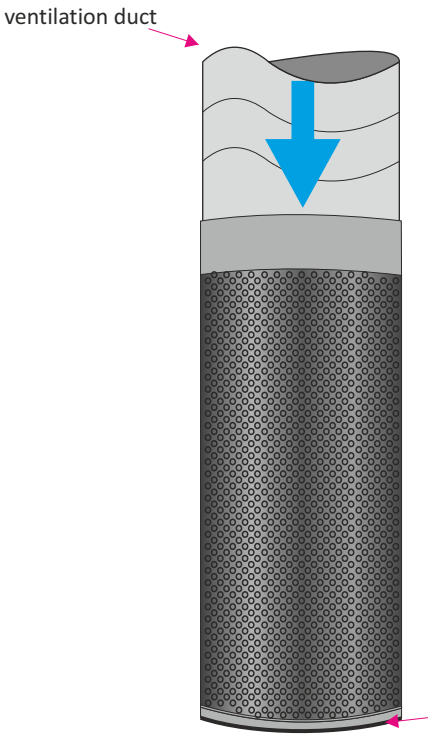
Hanging diffuser over the zone is the best for rooms heavily polluted and the small productions of heat



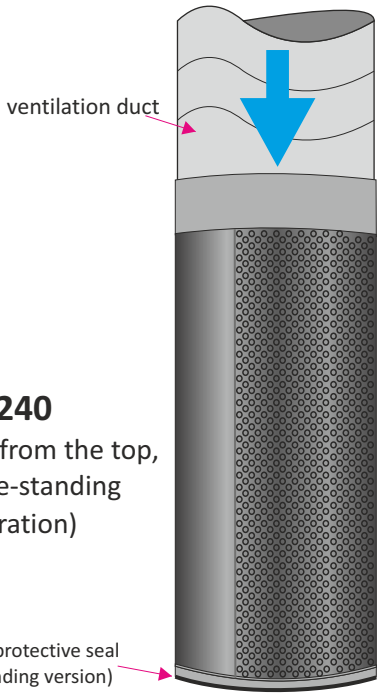
Standing version is the best option for removing high heat loads or when there are small / light pollution.



There is a possibility of production diffusers "at wall / column" with 2/3 perforation (240°)



NWJ-P 360
spigot connection from the top,
NW free-standing / free-hanging
(360° perforation)



NWJ-P 240
spigot connection from the top,
NW at wall, free-standing
(240° perforation)

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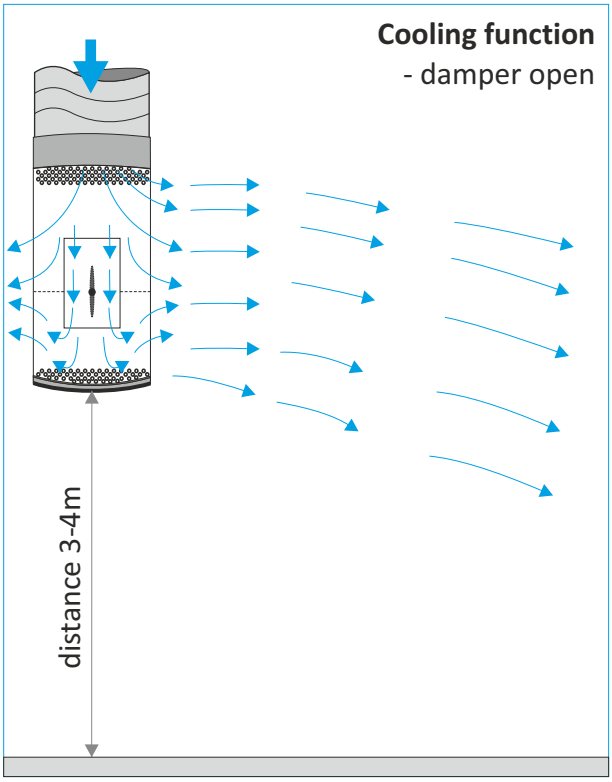
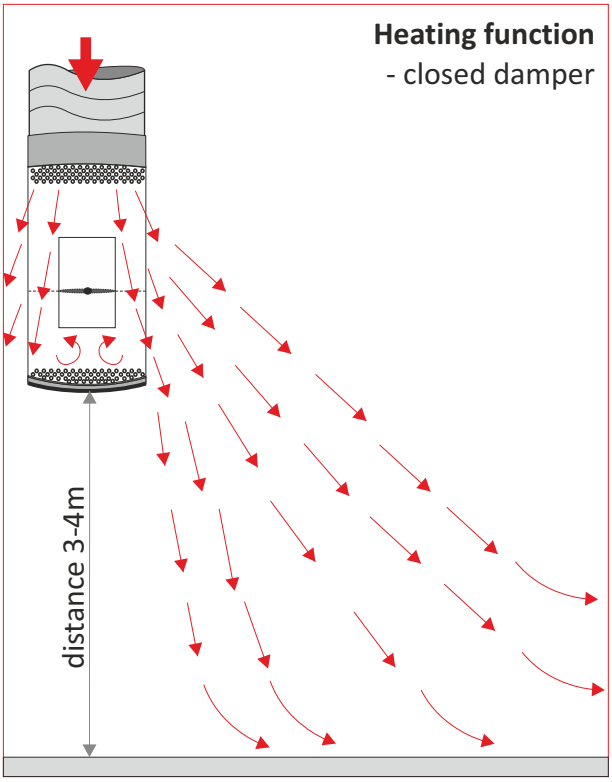
Use - Flow diagram of the air in room: hanging diffuser

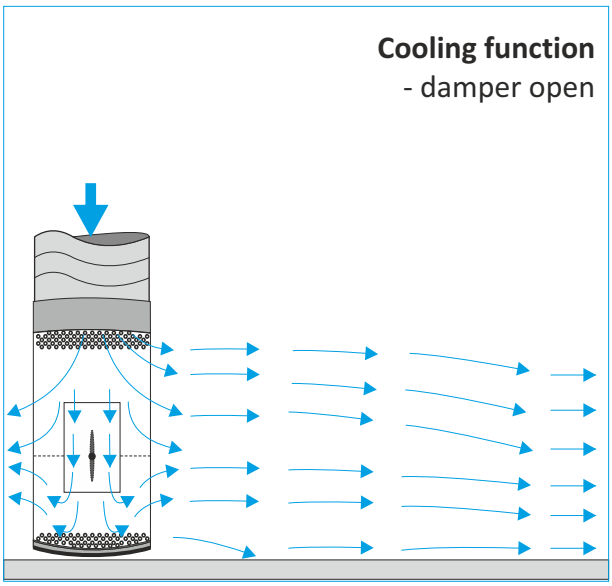
The maximum temperature difference between the air in the room and supplying air:
at heating -10K, while cooling - 5K.

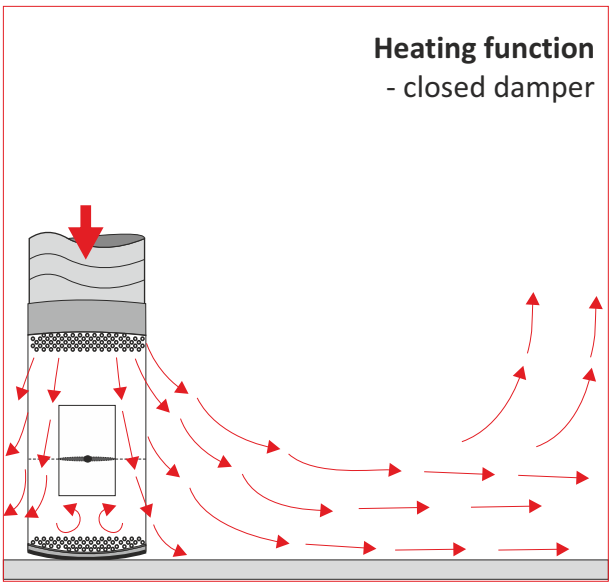
HANGING DIFFUSER





STANDING DIFFUSER





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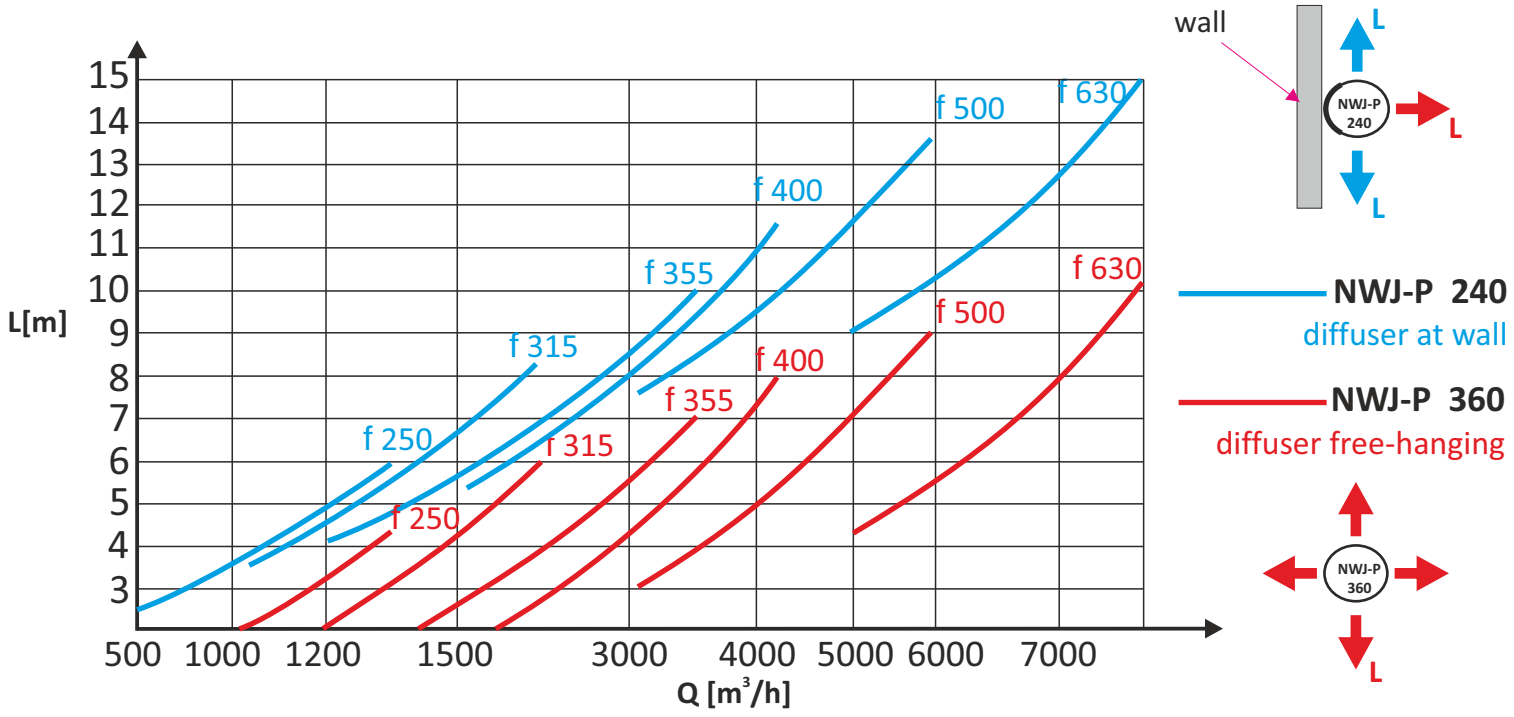
Specification - air flow regulation

In the case of displacement flow diffusers NWJ-P it is possible to adjust the air flow direction, especially important it is when diffuser working in functions both heating and cooling. One-piece damper, which is mounted inside diffuser, are responsible for changing the air flow. Adjustment the damper can be manual - from the outside or by a actuator. In the hanging version can be adjusted using pull rope.

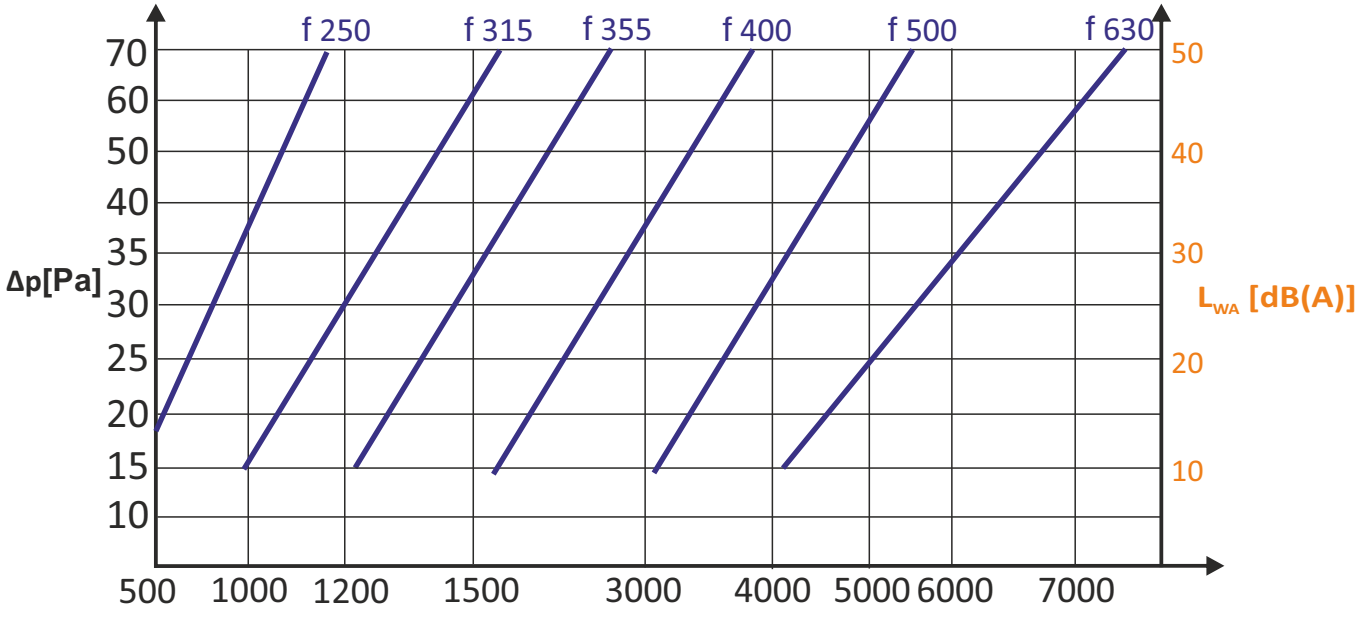
Technical data

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



Q [m³/h] - air volume flow L [m] - air stream range

Dependence of pressure drop Δp [Pa] and acoustic power L_{WA} [dB(A)] from air volume flow Q [m³/h]
COOLING - open damper



L_{WA} [dB(A)] - acoustic power Dp [Pa]- pressure drop

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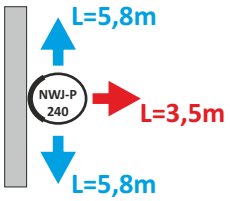
EXAMPLE

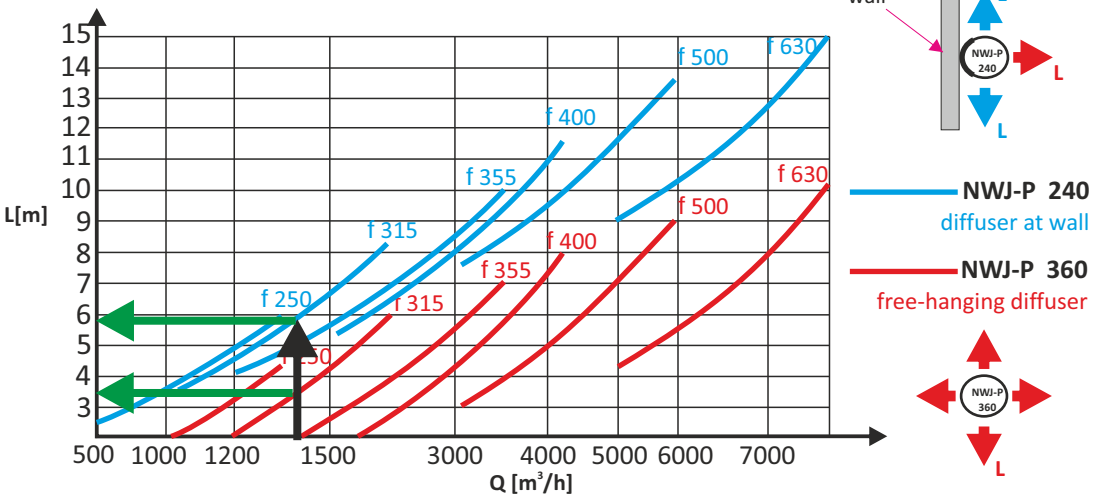
- diffuser hanging at wall NWJ-P (240° perforacji)
- air volume flow Q=1800 m³/h
- appropriate diffusers: **ϕ=315**, ϕ=355, ϕ=400

Reading from the graph:

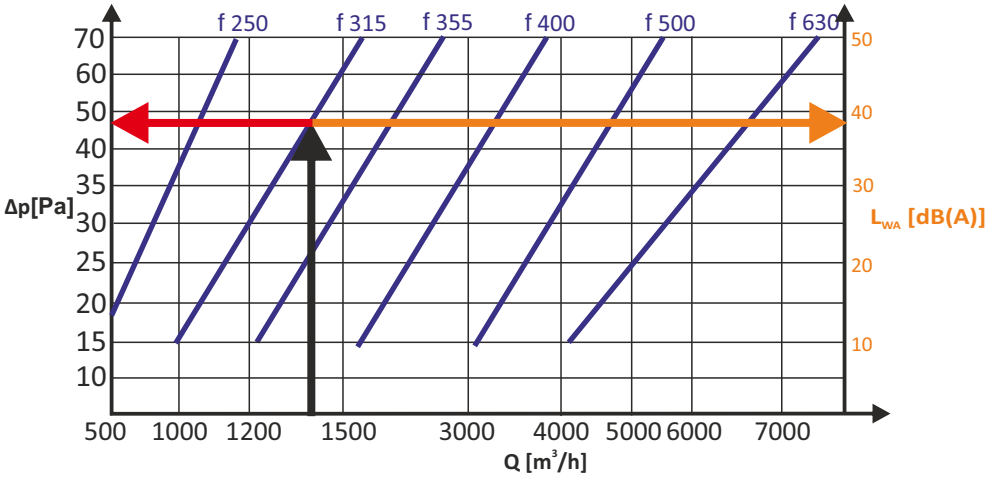
- range of air stream ΔL=3,5/5,8 m



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



Dependence of pressure drop Δp [Pa] and acoustic power LWA [dB(A)] from air volume flow Q [m³/h] COOLING - open damper



Reading from the graph:

- pressure drop Δp=47 Pa
- acoustic power L_{WA}<40 dB

The method of placing an order

Please make orders according to the following formula:

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

'W'	- Variants realization / location: **1** - round diffuser free-standing / free-hanging (perforation 360°) **2** - round diffuser at wall (perforation 240°)
'P'	Air flow regulation: **RR** - manual* **RS** - adjusting by electric actuator Belimo (not included) **RC**- manual adjustment using the pull rope (installation height 3m*)
'K'	- position of connection spigot: **G** - spigot from top *
'f d'	- diameter of diffuser connection spigot **200, 250, 315, 355...**
'H'	- height of the diffuser *
'RAL'	- diffuser color RAL
'M'	- material: **OC** - galvanized steel* **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.