Industrial diffuser

WKD 380 and 381

MADE IN CANADA

Maintenance and installation guide

KEEP THIS GUIDE

nadklima.com

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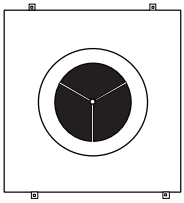
CONFIGURATION AND MODE OF OPERATION

Configuration

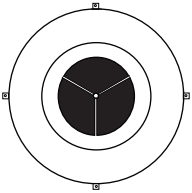
WKD 380 & 381

Square



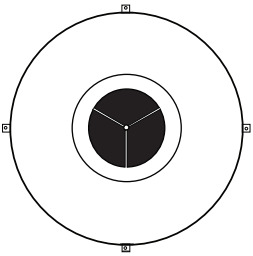
DN 600
603 mm X 603 mm
(23 3/4 in X 23 3/4 in)

Round

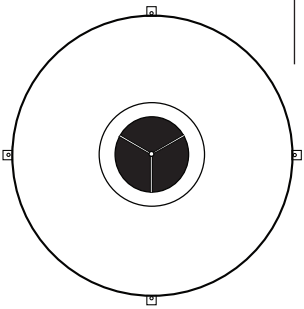


DN 600
Ø 603 mm (23 3/4 in)

WKD 380 only



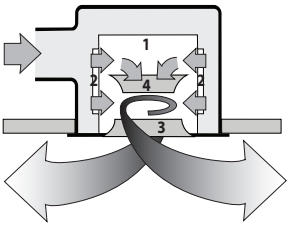
DN 800
Ø 800 mm (31,5 in)



DN 1000
Ø 1016 mm (40 in)

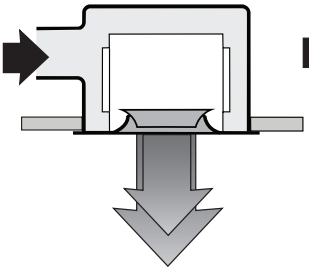
Mode of operation

The air flow entering the turbulence chamber (1) creates an intensive helical movement, depending on the positioning of the nozzle (4). The airflow at the deflector outlet (3) will produce air induction and a variable penetration.

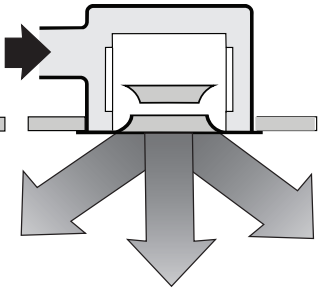


Heating

Nozzle : Position 1
Stable vertical air flow with large penetration.

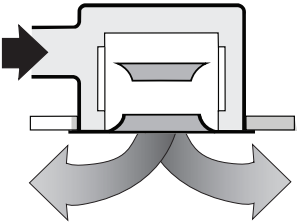


Nozzle : Position 2
Vertical airflow with a helical effect.

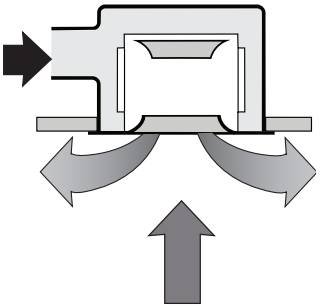


Cooling

Nozzle : Position 3
Horizontal helical air flow and a relatively weak reach.



Nozzle : Position 4
Horizontal air flow (even in free suspension) with a maximal horizontal reach and an elevated primary induction.



INSTALLATION IN A GYPSUM CEILING

WKD 380 & 381 - Square

A) Opening in the gypsum

Choose one of the three (3) options instalation shown at right.

Option 1

- Cut a square in the gypsum of the dimension of diffuser minus 13 mm (1/2 in).

Option 2 et 3

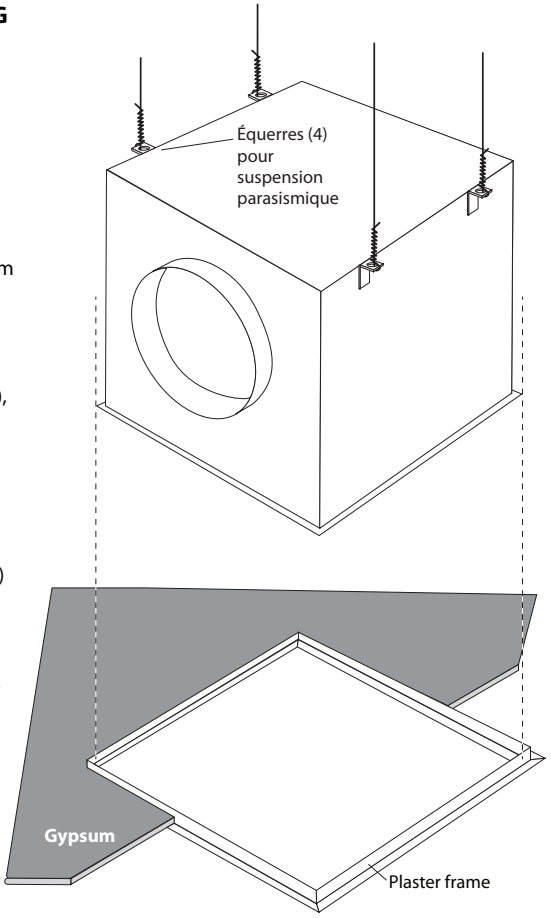
- Cut a square in the gypsum of the dimension of diffuser plus 13 mm), (1/2 in).
- Around this hole, insert a plaster frame and fix it

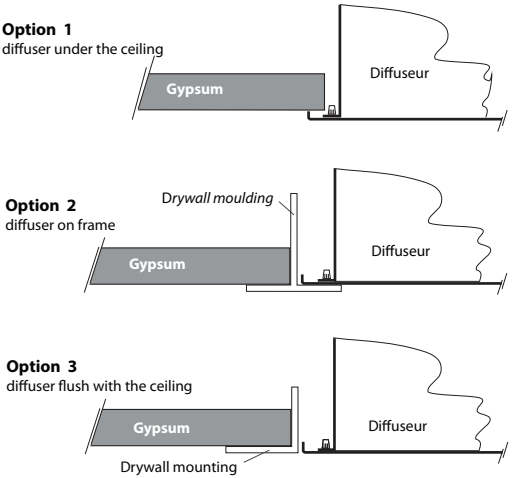
B) Install diffuser

The plenum will be suspended with metal wire through suspension's holes (4) predrilled for this purpose

As shown in the drawing on the right, install the plenum by adjusting its height.

According the **option 1**, the base of the diffuser will will press outside the gypsum 's hole, directly to the ceiling.
or
according **option 2 and 3** , the base of the plenum should be flush to the hole.





INSTALLATION IN A GYPSUM CEILING

WKD 380 & 381 - Round

A) Opening in the gypsum

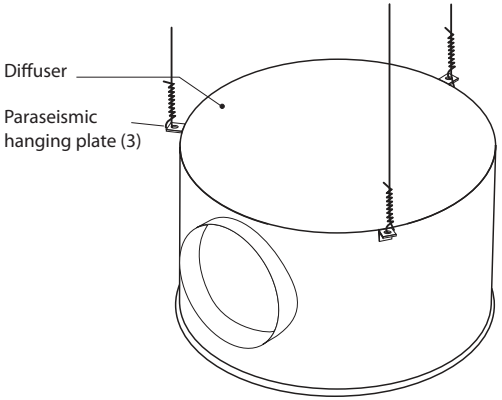
Choose one of the two (2) instalsation options shown on the right.

Option 1

- Measure the diffuser's diameter (ØD).
- **REMOVE** 13 mm (1/2 inch)
- Cut a circle in the gypsum equivalent to this new measure (ØD - 13 mm (1/2 inch)).
- Around this hole, place the gypsum guide and fix it.

Option 2

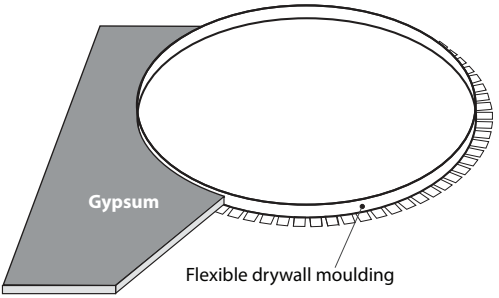
- Measure the diffuser's diameter (ØD).
- **ADD** 13 mm (1/2 inch)
- Cut a circle in the gypsum equivalent to this new measure (ØD + 13 mm (1/2 inch)).
- Around this hole, place the drywall moulding and fix it.



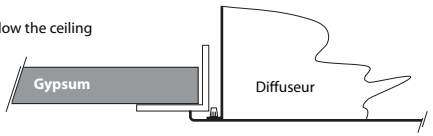
B) Install the diffuser

The plenum shall be hanged by the paraseismic hanging plate (3) with metal wire.

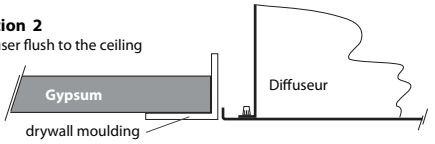
As the drawing on the right shows, install the diffuser by adjusting its height either:
according **option 1**, diffuser rim will be supported under the ceiling
or,
according **option 2**, the base of the plenum must be flush to the hole.



Option 1
diffuser below the ceiling

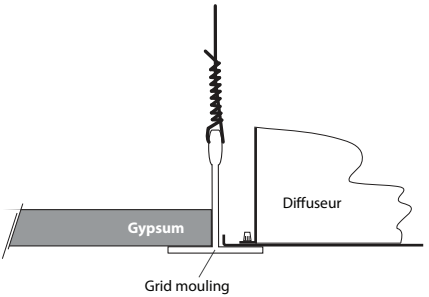


Option 2
diffuser flush to the ceiling



INSTALLATION IN A SUSPENDED CEILING

WKD 380 & 381 - Square DN 600



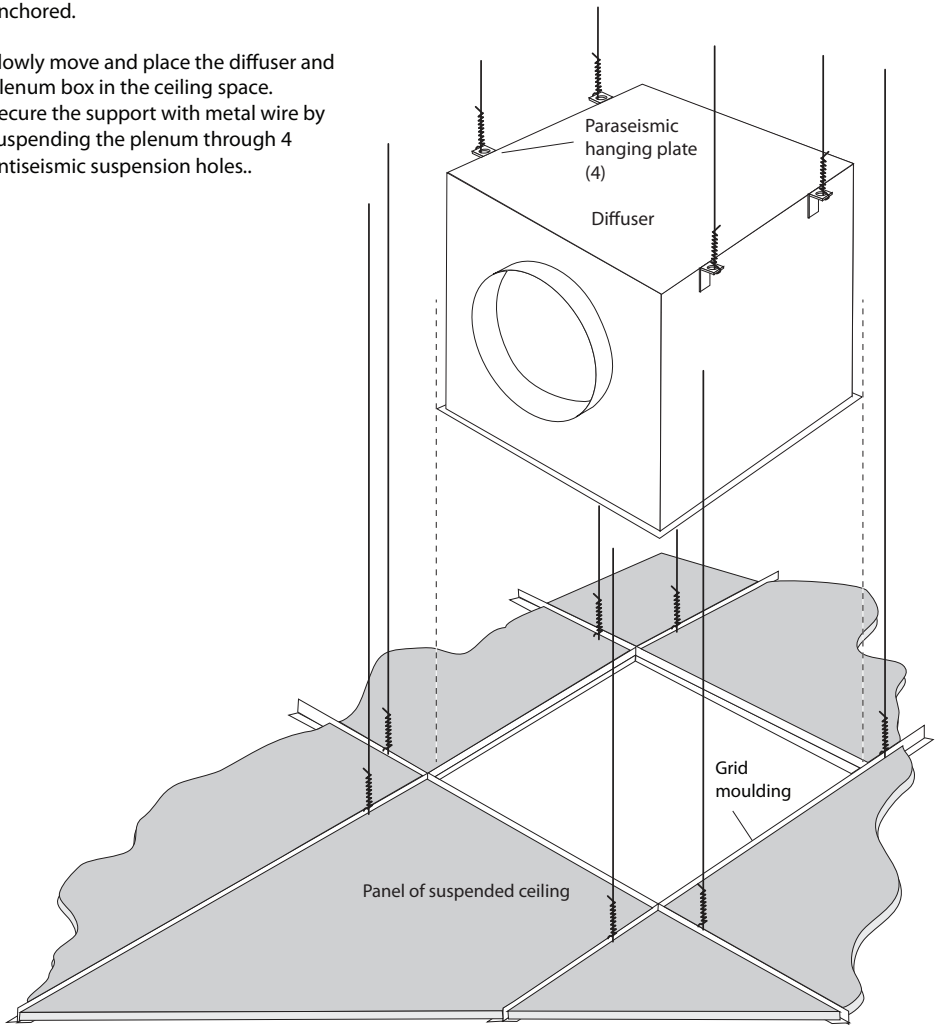
A) Grid moulding

Make sure that the grid moldings of the suspended ceiling match the diffuser's face dimensions.
(610 X 610 mm (24 X 24 in)
Also, make sure that the moldings of the ceiling are firmly anchored.

B) Install the diffuser

The diffuser can be heavy weight. If he leans on the grid moulding, make sure that these are very well anchored.

Slowly move and place the diffuser and plenum box in the ceiling space. Secure the support with metal wire by suspending the plenum through 4 antiseismic suspension holes..

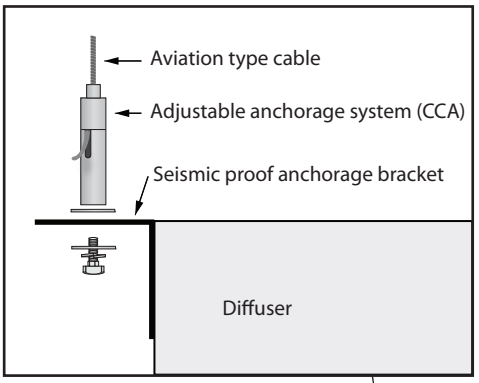


INSTALLATION IN FREE SUSPENSION

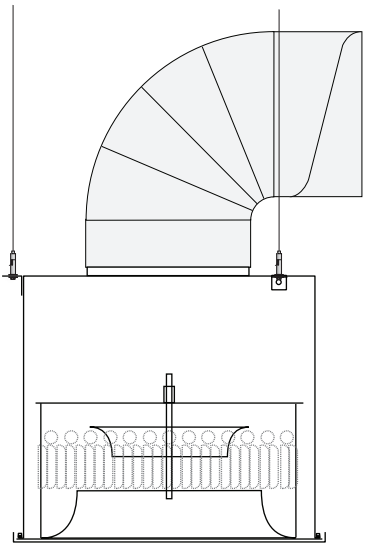
WKD 380 & 381

Using the anchoring bracket situated on the side of the diffuser, suspend the diffuser at the desired height. In order to obtain a precise adjustment, we recommend using the anchoring system CCA with an aviation type cable (3048)

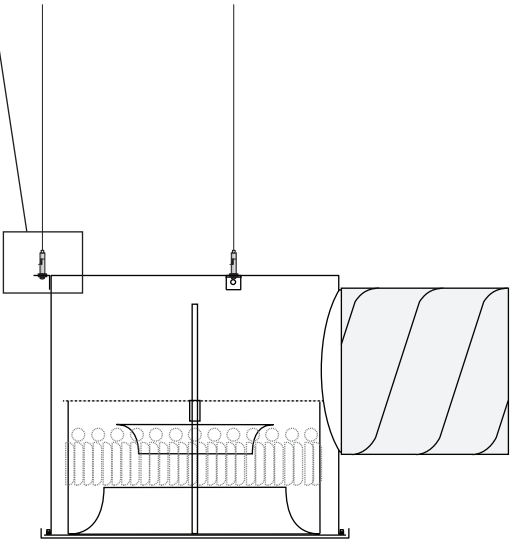
Verify that the diffuser is well anchored.
Once this process is finished you can connect the air intake



Top air intake



Side air intake



MAINTENANCE

The diffusers WKD 380 and WKD 381 of NAD Klima requires no special maintenance other than periodic cleaning.

We recommend cleaning the diffuser with a multi-filament brush or duster microfiber that you will pass softly on the diffuser. It has thermo-lacquered finish for an easy cleaning, as dust does not stick to it.

When cleaning, gently move the brush or duster on diffuser.

Make sure nothing is obstructing the proper operation of the diffuser.

NAD Klima diffusers are the result of a manufacturing process in which our experts successfully meet your requirements and particular challenges.

Our range of equipment comprises the latest technological innovations. Our passion for work well done and digital precision ensure that the resulting product will guarantee the highest standards.

Manufactured in Sherbrooke, Quebec, (Canada) and distributed all across North America, our products raise the bar in terms of standards of quality, efficiency and energy savings.

A leader in air diffusers for LEED projects, NAD Klima is always striving to provide better comfort to consumers.

NAD Klima all products are the pride of an inventive, innovative and devoted team.

Our goal is not only to supply diffusers, but to create outstanding results.

We are NAD Klima.

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