Duct diffuser

SRA

MADE IN CANADA

Maintenance and installation guide

KEEP THIS GUIDE

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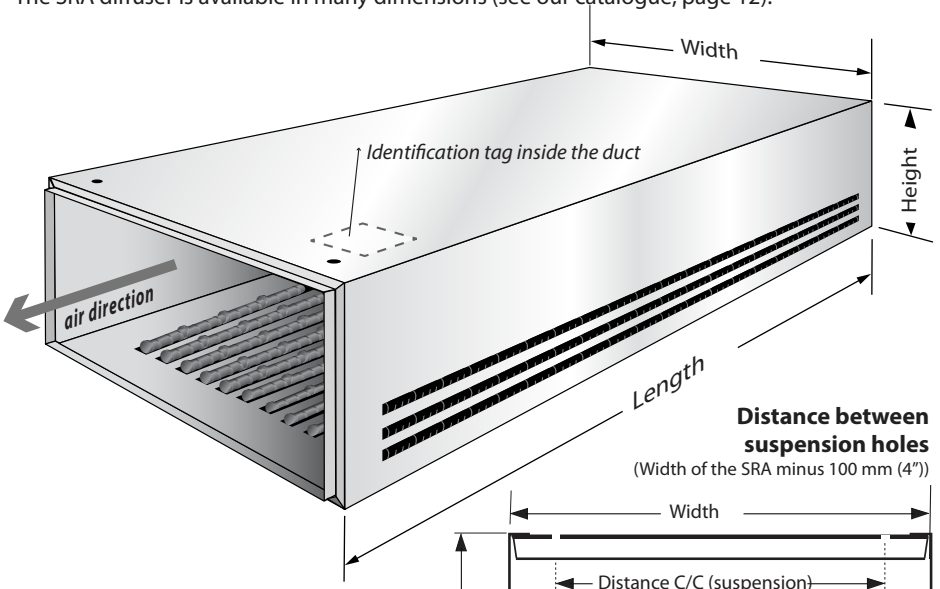
Configuration

The SRA diffuser is a smooth diffuser with rectangular sections on which slots are mounted length. The number of slots is determined by air flow quantity and duct dimensions. The slots contain 100 mm long ABS eccentric rollers or ABS nozzle rollers (black, or white). The eccentric rollers are provided with alphanumeric guides which allow airflow pattern adjustment across a 180°range (see page 9).

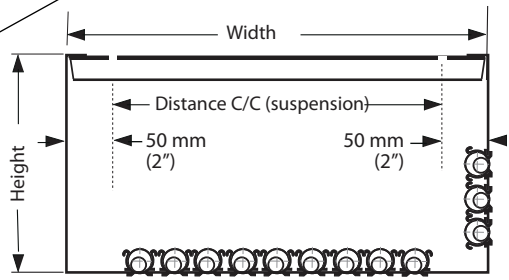
Passive ducts without slots are available in the same dimensions as the active SRAs in order to ensure duct network uniformity.

The SRA diffuser is available in many dimensions (see our catalogue, page 12).

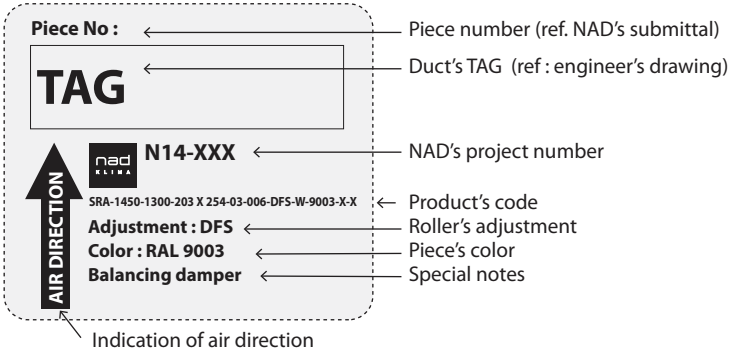


Distance between suspension holes

(Width of the SRA minus 100 mm (4"))



Description of the identification tag



Suspension

The suspension of the SRA diffuser is assured by **threaded rods** provided by the installer. (Standard suspension) (see page 4)

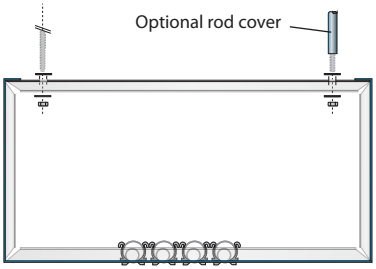
Upon request, colored rod covers are supplied to cover the threaded rods.

It should be noted, however, that the SRA diffusers can be attached directly to the ceiling (see page 6).

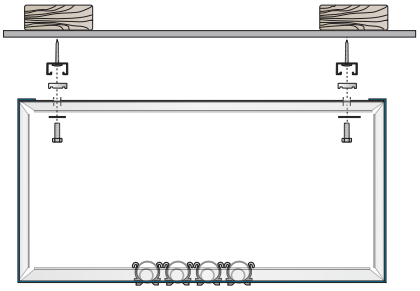
Other methods of suspension are available; the steel suspension rail*, which greatly improves installation, or suspension with a high tension metallic cable*.

*These alternative suspension modes can be provided by NAD Klima.

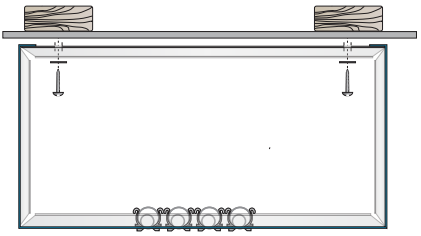
Installation with threaded rods - page 4



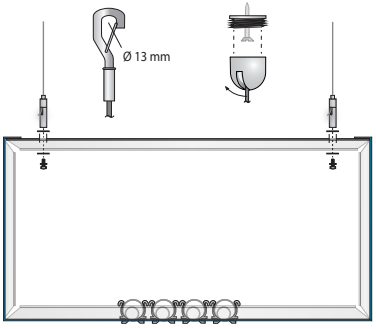
Installation with rail - page 5



Installation to the ceiling - page 6



Installation with cables - page 7



Installation with threaded rods

A) Take the distance X between the suspension holes located on the diffuser's top. Take the diffuser's width minus 100 mm (4") *(See illustration A).*

B) Determine the length (Y)
- To determine the length of the first duct, subtract 2" from its length
- For the remaining ducts use the exact length of the duct. (*See Illustration B)*

C) Secure the threaded rods to the ceiling. Make sure to respect the width between rods (X) and the length between rods (Y).

The threaded rods must be cut to the desired lengths prior to installation.

D) Install the rod covers before the diffuser.

Install the diffuser aligning the rod to the suspension holes. (*See illustrations C and D)*

For installation of next diffusers, see page 8.

Note: The threaded rods are supplied by the installer.

Illustration A.

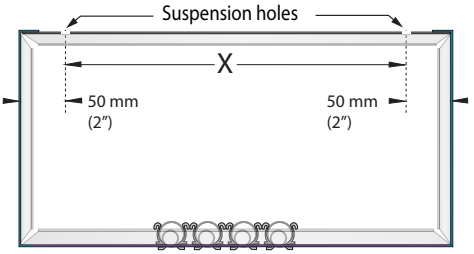


Illustration C

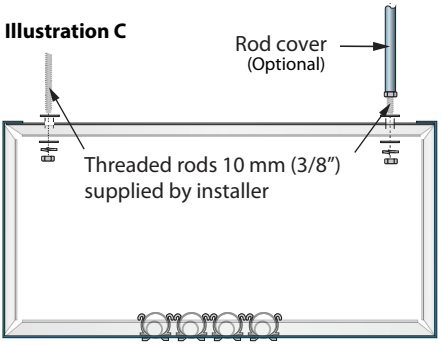


Illustration D

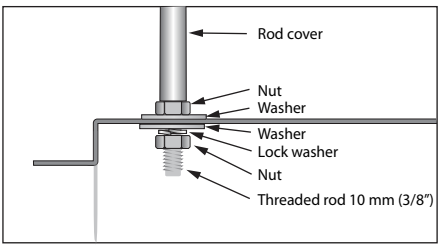
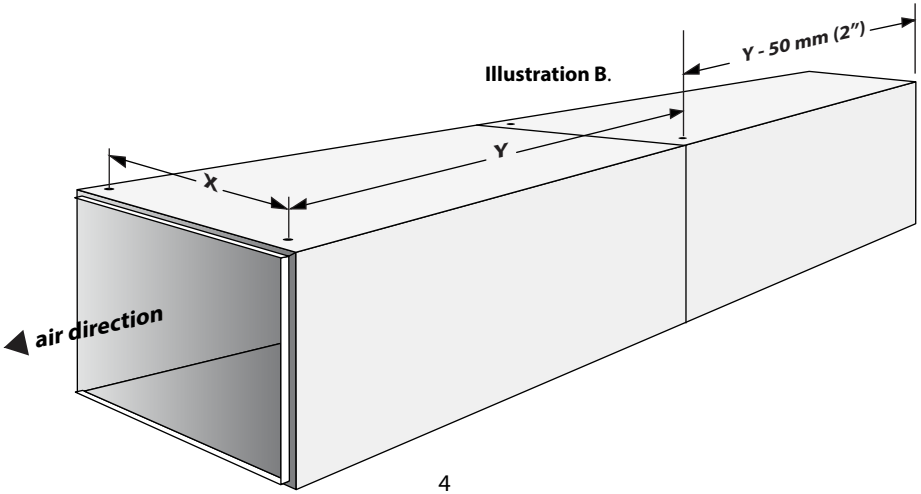


Illustration B.



Suspension with rails

A) Rails installation

Take the distance X between the suspension holes located on the diffuser's top.

Take the diffuser's width minus 100 mm (4") **(See illustration A).**

Secure the rail to the ceiling making sure to respect the width between rails (X).

In case of a rail suspension installation **(illustration B)**, a 9.5 mm rod threaded rod (3/8")(not supplied) will be used.
A rod cover can be used.

In the case of an installation directly to the ceiling, **(illustration C)**, make sure the rails are securely anchored using screws (not supplied) every 405 mm (16").

Illustration A.

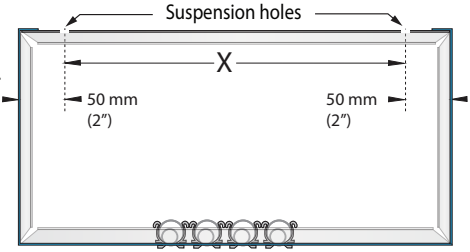
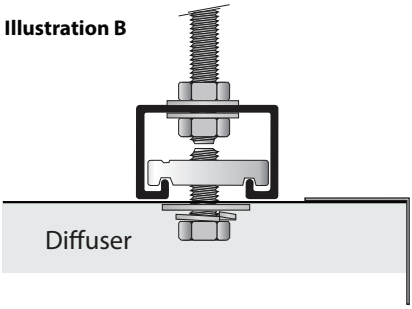


Illustration B



B) Install the achor bolt

From the inside, screw the bolt, then insert the flat washer before inserting the bolt into the nut anchoring **(illustration C-1)**.

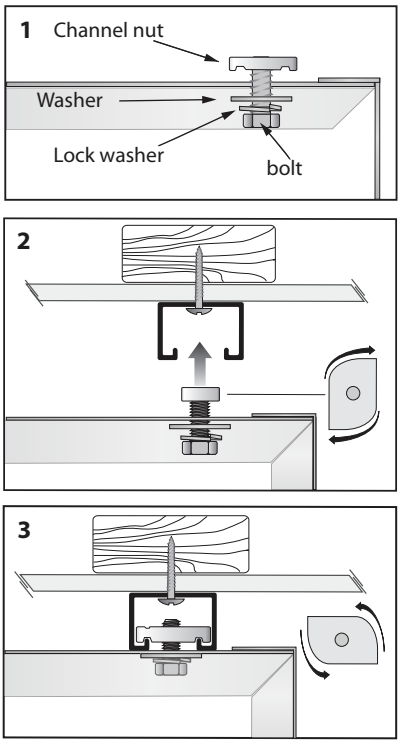
DO NOT THIGHTEN THE BOLT IMMEDIATLY.

C) Hanging the diffuser

When the anchor nuts are installed, turn the nut so that its length is parallel to the side of the diffuser.
Thus, it may enter the track with ease. **(illustration C-2)**

The diffuser will be supported while you tighten the bolts **(illustration C-3)**.

Illustration C



For the installation of next diffusers, see page 8.

Installation directly to the ceiling

Determinates the distance of suspension holes, "X" for the width and "Y" for the lenght.

A) For the width "X"
Take the distance between the suspension holes located on the diffuser's top. Take the diffuser's width minus 100 mm (4")
(see illustration A).

B) Determine the length (Y)
- To determine the length of the first duct, subtract 2" from its length
- For the remaining ducts use the exact length of the duct **(see illustration B).**

Make sure the ceiling is strong enough to receive and support the diffuser's weight. To evaluate the weight of the diffuser, consult our SRA catalog on page 12.

C) Fix the first SRA on the air supply network. Secure the SRA diffuser to the ceiling with screws and washers adapted to the type of ceiling **(voir dessin C).**
(Screws and washers are not supplied.)

Illustration A.

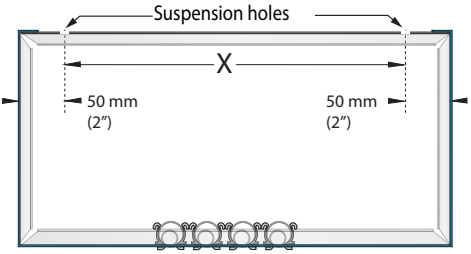
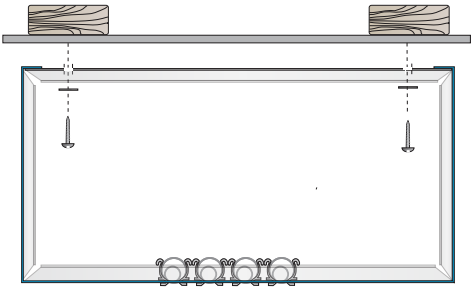


Illustration C.



For installation of next diffusers, see on page 8.

Illustration B.

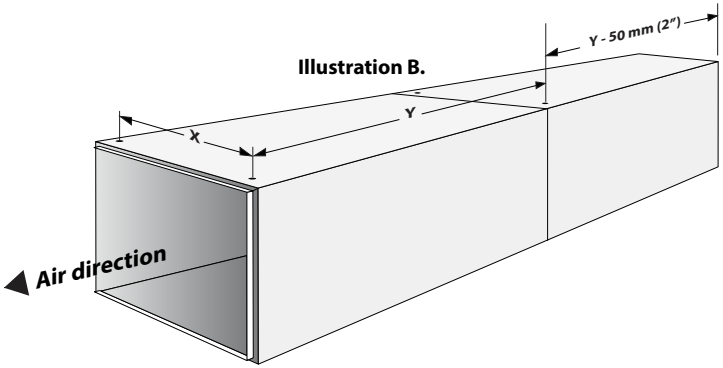
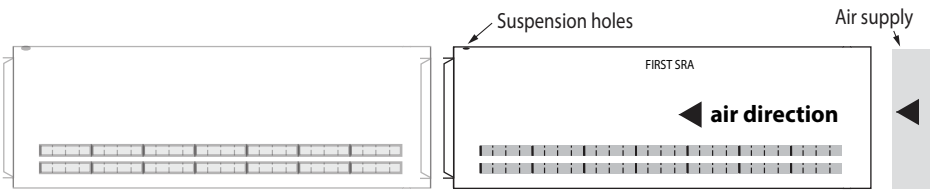


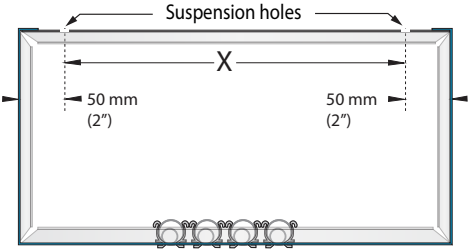
Illustration C.



Suspension with steel cables

Determinates the distance of suspension holes, "X" for the width and "Y" for the lenght.

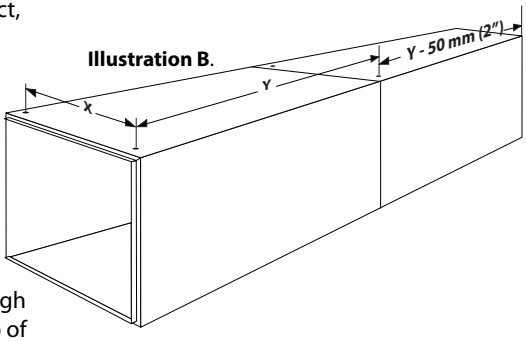
illustration A.



A) For the width "X"
Take the distance between the suspension holes located on the diffuser's top. Take the diffuser's width minus 100 mm (4") **(see illustration A).**

B) Determine the length (Y)
To determine the length of the first duct, subtract 2" from its length
For the remaining ducts use the exact length of the duct **(see illustration B).**

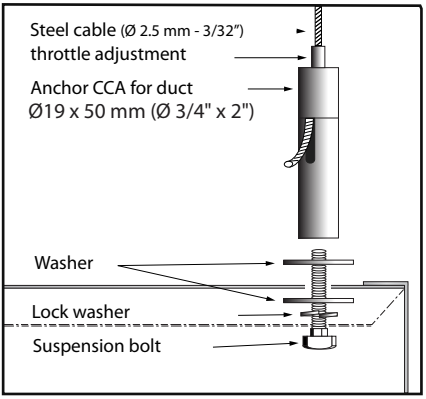
Illustration B.



C) Installation of suspension cables
Calculate the desired length and add 1 inch (25 mm).

D) Diffuser installation
Insert the anchor bold (supplied) through the suspension hole located on the top of the diffuser. (**illustration C**)

illustration C.

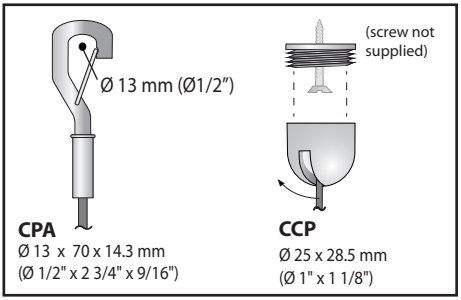


E) Adjust diffuser height
Insert the cable in the throttle adjustment and adjust the height.

Cut excess cable.

For installation of next diffusers, see on page 8.

Available ceiling anchors



Installation of next diffusers

Assembly

The SRA diffuser sections are assembled directly one behind the other, without sleeves.

An identification tag will indicate the direction ducts must be installed..

Installation

Add a thread of sealer at the junction of two diffusers
(see the shaded area on illustrations A and B).

Insert the new section interior fold on the decline outside the previous section
(see illustration A).

The new section will be supported by the exterior fold of iprevious section.

At the other end, install the choosen suspension (threaded rods, rail or steel cables).

When in position, securely tighten the two bolts.

Repeat many times as there are sections.

illustration A.

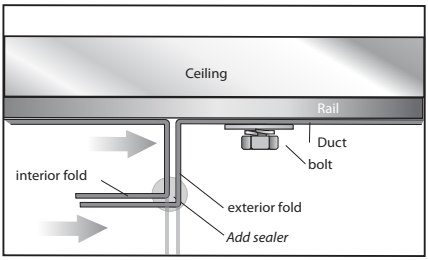
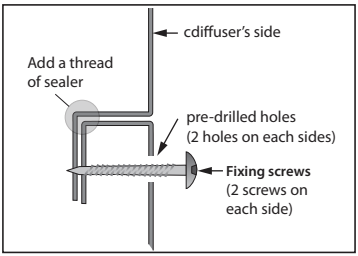
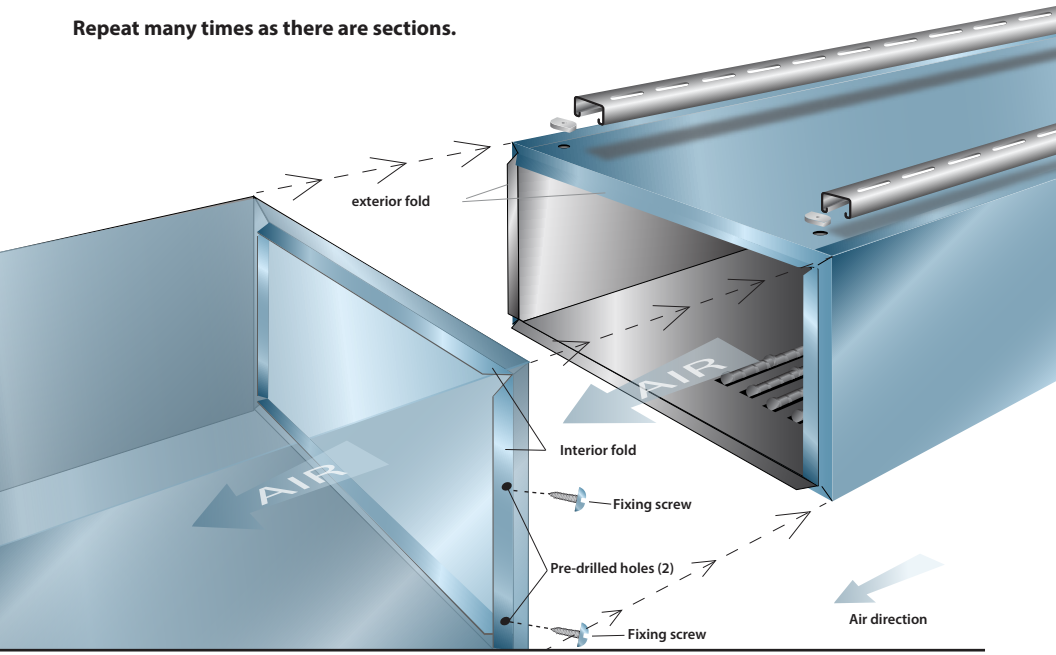


illustration B.



Locates on each side of the duct, two pre-drilled holes help to secur thighten the SRA with the screws provided for this purpose.



Adjustment keys

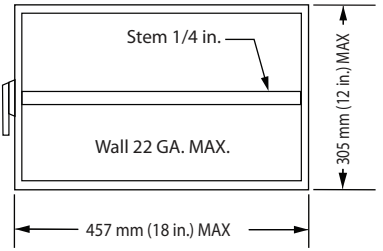
When installed at the factory, the adjustment keys are in the closed position. It is important to put them in the 100% open position following installation on site.

Dimensions:

457 mm (18 in) X 305 mm (12 in)

Wall: 22 GA. / Stem: ¼ in.

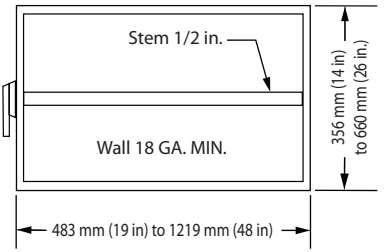
Key: Twistlock Flat h-102



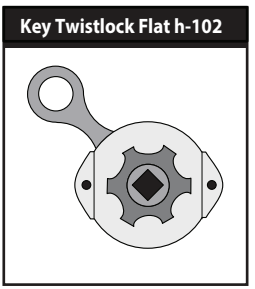
483 mm (19 in) to 1219 mm (48 in) X 356 mm (14 in) to 660 mm (26 in)

Wall: 22 GA. / Stem: ¼ in.

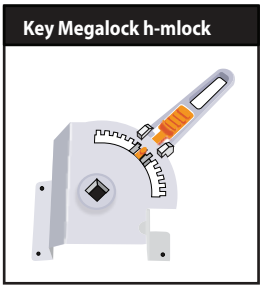
Key: Megalock h-mlock



Key Twistlock Flat h-102



Key Megalock h-mlock



CONTROLLING SRA AIR FLOW DIRECTION

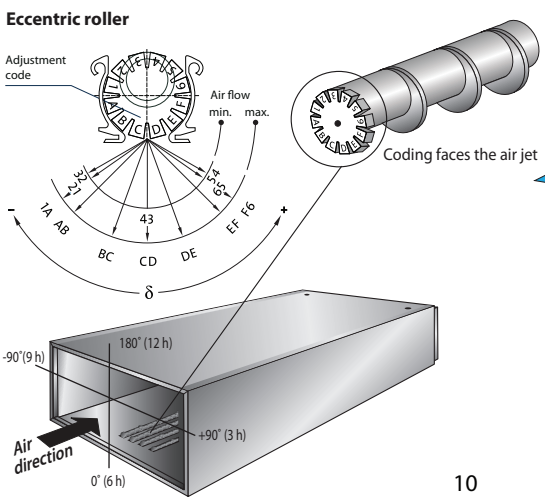
Setting of the air jet direction

Due to the shape of the eccentric rollers and adjustment dial with alphanumeric characters, the air jet direction at the diffuser's outlet can vary up to 180°. For each direction, there are two (2) roller positions ("reduced" or "not reduced"), as illustrated in figure E.

The length of each roller is 100 mm and they are individually adjustable. As a result, airflow combinations are almost infinite. In manufacturing, the ducts are individually adjusted for each project. The standard setting for the rollers is set to diffusion mode in the positions "21" and "65" alternately. This setting produces strong induction, which can be used to meet heating and cooling needs, thereby creating high mixing levels.

As a result, the divergent mode allows air jets to blow in more accurate directions. This mode also allows a longer projection of the airflow. In specific zones, which are habitually difficult to cover, a specialized setting can be created. Figures C and D, show the relationship between eccentric roller position and the exiting airflow direction. Note that to maximize air projection, multiple jets can be orientated in the same direction optimizing the zone coverage even when heating.

illustration A.



Examples

Slots at 0°

Air direction

Figure A

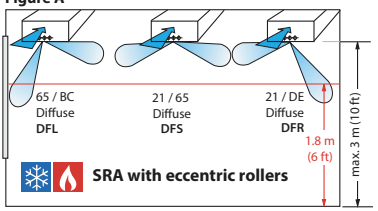


Figure B

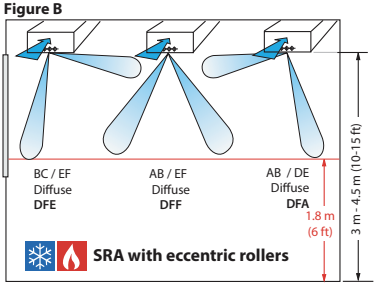


Figure C

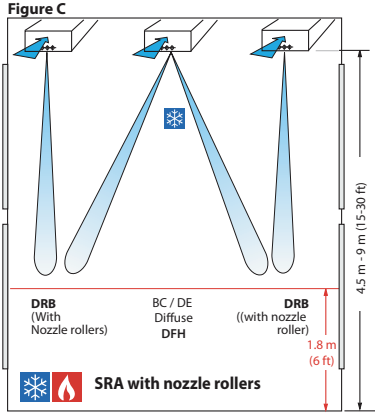
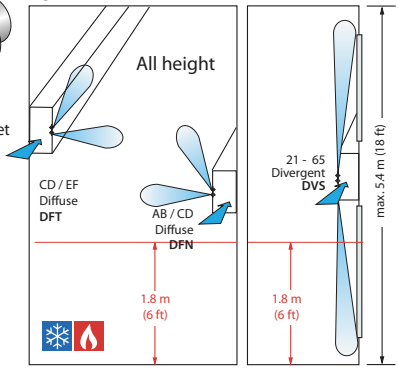


Figure D Slots at + 90°



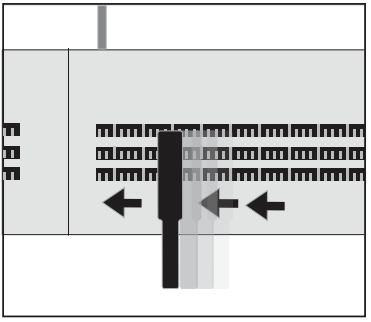
SRA diffuser with eccentric rollers and/or nozzles

Maintenance

The NAD Klima SRA diffuser requires no special maintenance other than periodic cleaning.

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

When cleaning, gently move the brush or duster in the same direction as the rollers, so as not to change their adjustment*.



IMPORTANT

*** RE-ADJUSTMENT OF SRA ECCENTRIC ROLLERS**

If, during the cleaning of the RRA diffuser, a airflow disalignment occurs, it is important to realign rollers in their original position, to maintain full effectiveness of your diffuser.

Only a technician specializing in air balancing is qualified to restore roller adjustment to its initial position.
To do this, he must have access to the initial data and engineering requirements, then follow the instructions provided in this manual on page 9.

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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