

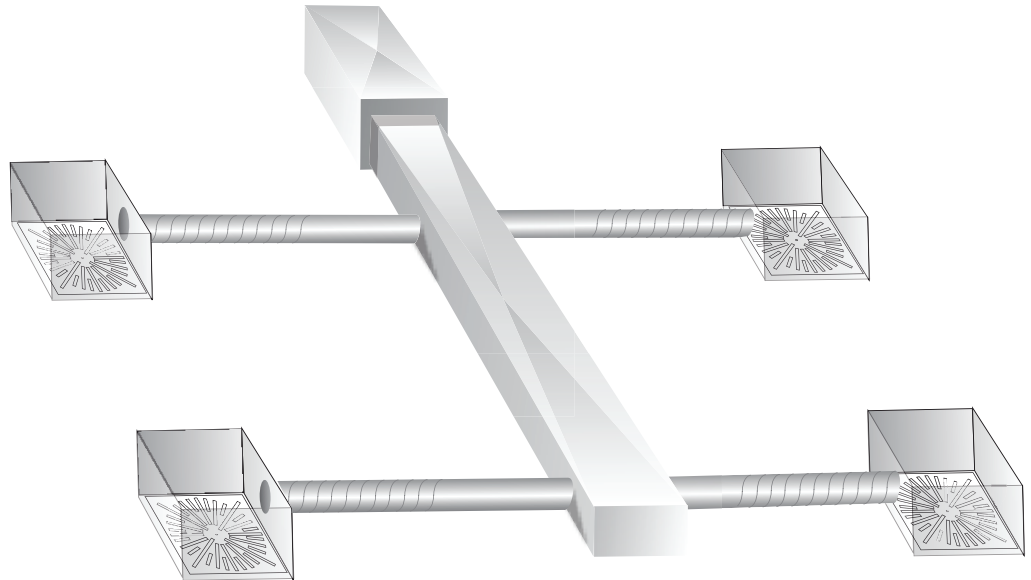
Calibration and adjustment of NAD diffusers



CALIBRATION OF NAD DIFFUSERS

All balometer create resistance to the air output in the ventilation system. This resistance depends on the model of diffuser and it's deflection.

Therefore, the posted air flow value by the balometer will be inferior to the actual air flow.



CALIBRATION OF NAD DIFFUSERS

In order to determine the factor of correction to the resistance, you must take a reading in the duct without the balometer and at the diffuser with the balometer

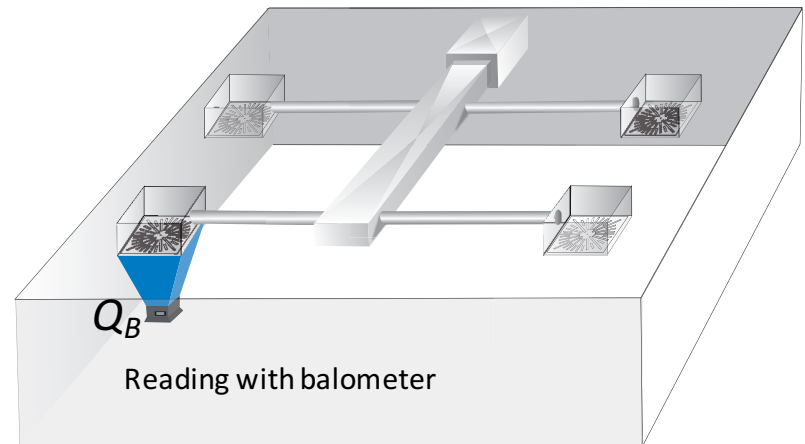
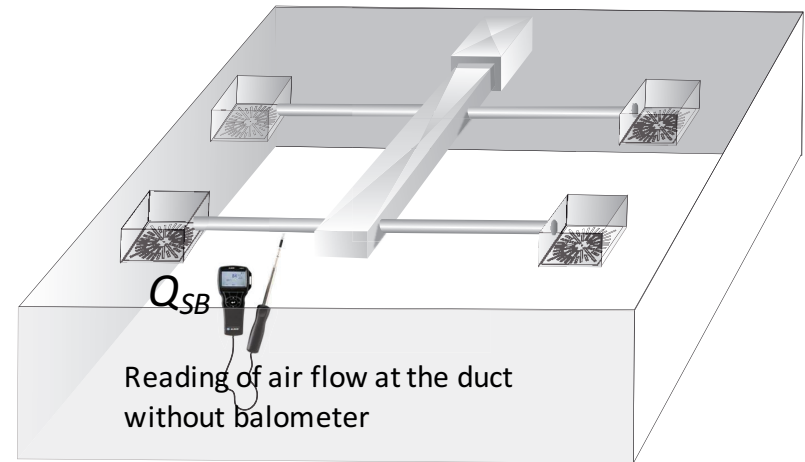
This factor is defined as:

$$F = \frac{Q_{SB}}{Q_B}$$

With : F Correction factor

Q_{SB} Air flow in duct without balometer

Q_B Air flow at diffuser with balometer

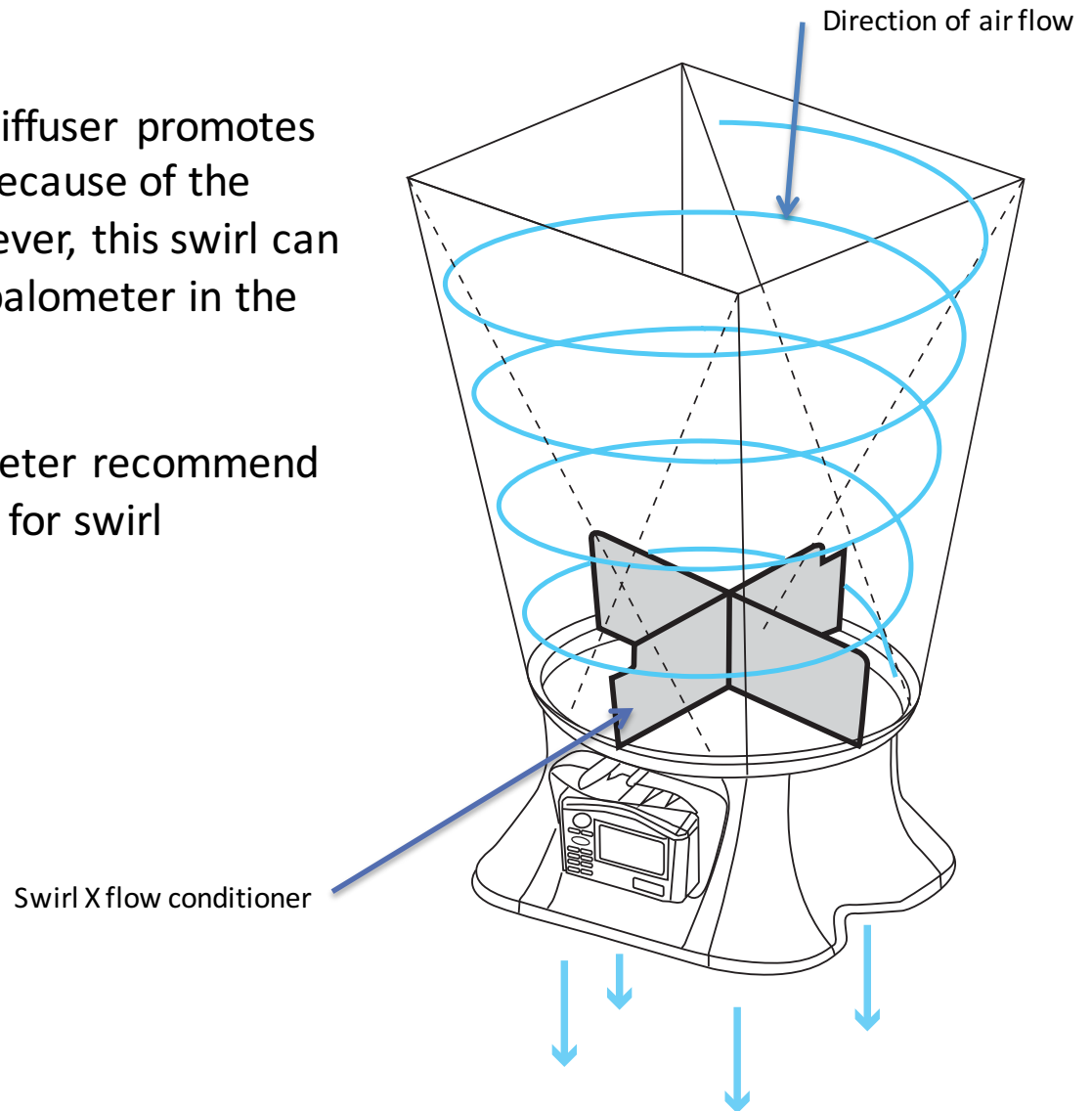


IMPORTANT : The correction factor varies depending on the air flow to the diffuser

USAGE OF SWIRL X FLOW CONDITIONER

The air flow through the swirl diffuser promotes an efficient mixture of the air because of the swirl close to the diffuser. However, this swirl can cause reading errors from the balometer in the range of 40%. *.

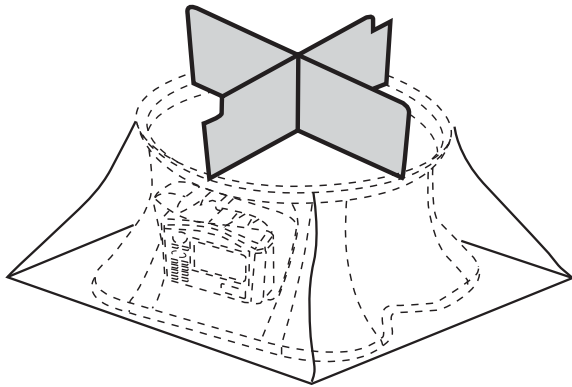
The manufacturer of the balometer recommend using a swirl X flow conditioner for swirl diffusers..



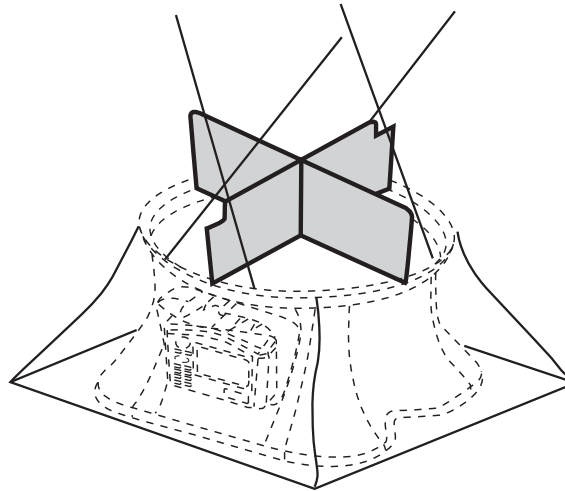
* Swirl X flow Condition

INSTALLATION OF SWIRL X FLOW CONDITIONER

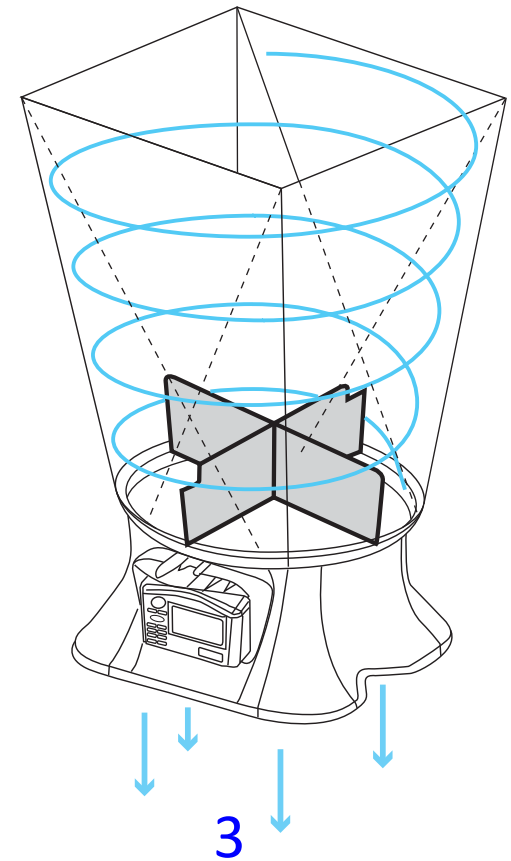
- 1 – Insert conditioner above the base lip in the space provided.
- 2 – Install support rods and the 2 ft X 2 ft cloth (610 mm x 610 mm).
- 3 – Place hood under the swirl diffuser and take a reading of the air flow (do not forget to apply the factor of correction to determine the correct flow reading).



1

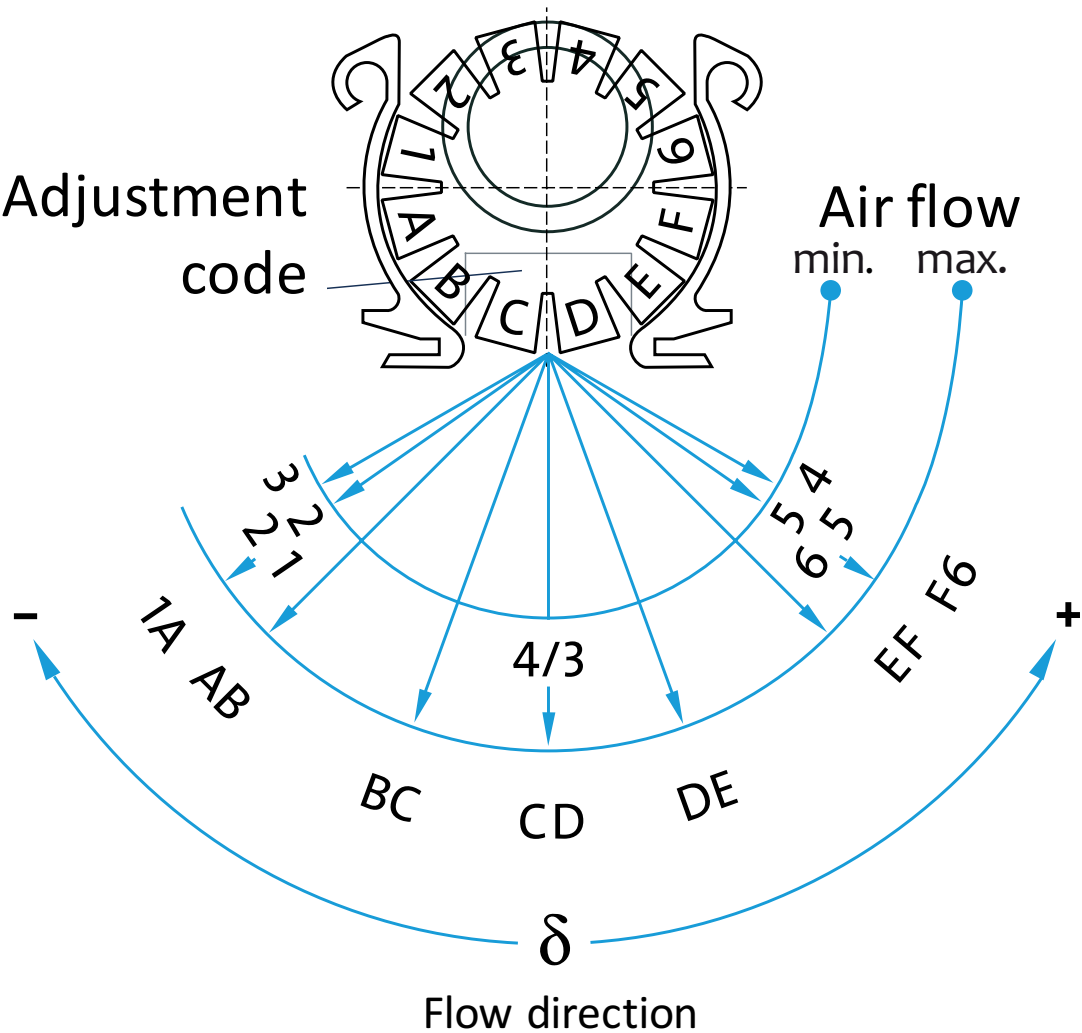


2



3

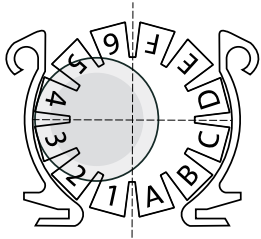
AIR FLOW CONTROL



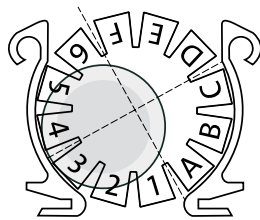
AIR FLOW DIRECTION VS ECCENTRIC ROLLER ADJUSTMENT

The positioning of the eccentric roller produce, with the help of the slot profile, a flow channel in which the air is funneled. Nearing the exit, an air depression is created.

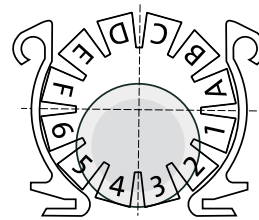
Position 1 A



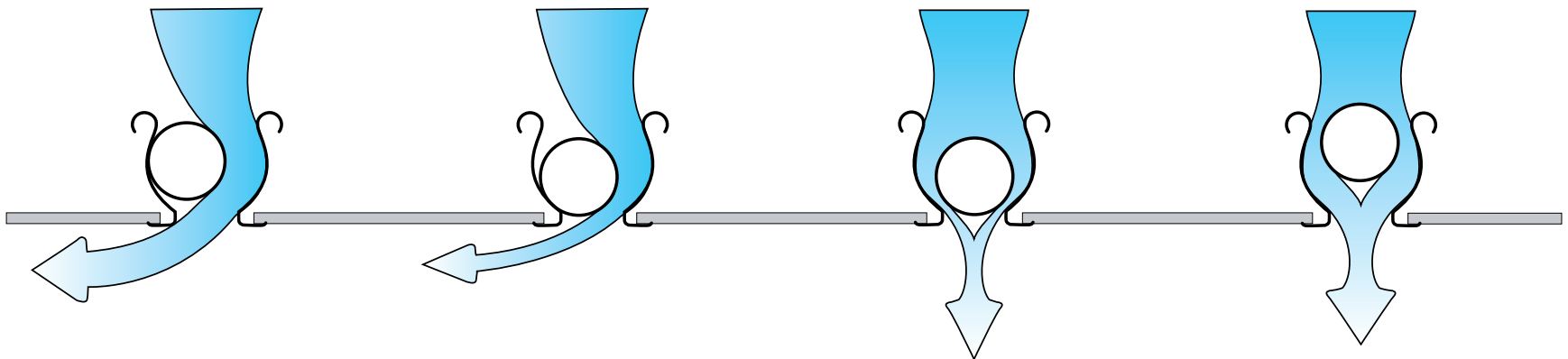
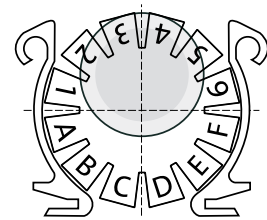
Position 2 1



Position 4 3



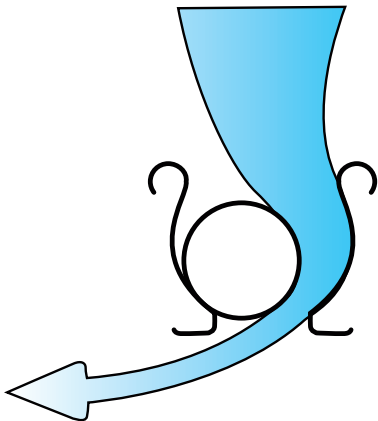
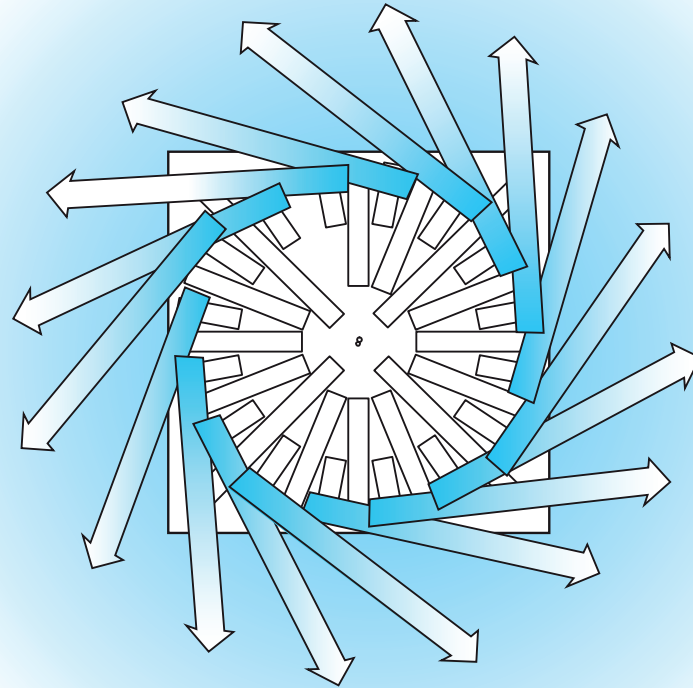
Position C D



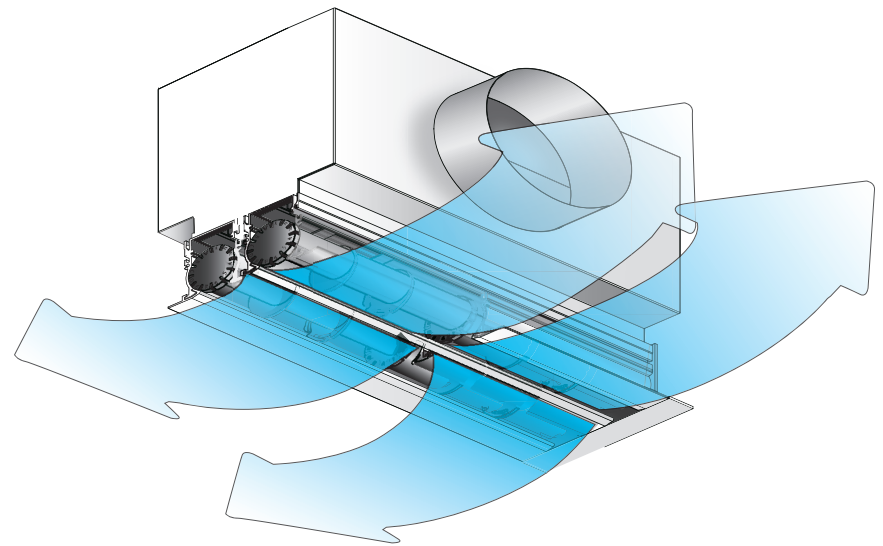
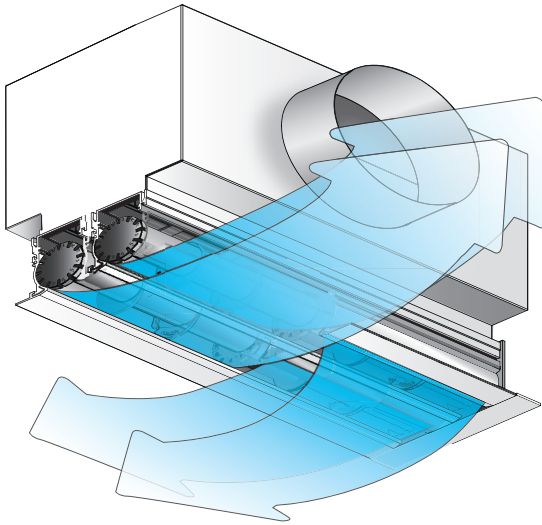
The swirl movement

In the case of the DAL 358 diffuser, when all the rollers are in the 21 position, the air exit the diffuser in a swirl pattern.

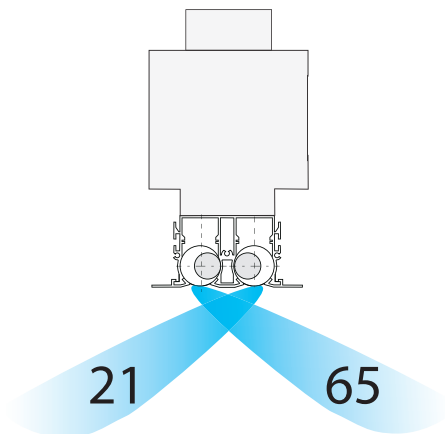
This swirl movement produces a strong induction.



The direction of the air flow



Diffuse



Divergent

