



# INDUCTO Specialized diffuser





#### **Table of content**

Description and benefits	1
Configuration and dimensions	2
Mode of operation	3
Performances	4
Specifications	5
Codification	5

#### Presentation and benefits

Providing a comfortable ventilation in theatres, auditoriums, concert halls and conference rooms presents a particular challenge. Traditional air ventilation systems are not generally designed to remove efficiently heat and odors generated by crowds. As a result, it is important to replenish the occupied areas with hot air not polluted by convection.

To achieve this, the INDUCTO diffuser from NAD Klima is specially designed to efficiently ventilate these kind of crowed areas.

It is available in two basic models, in a basic column supporting the seat or in a free-standing unit.

The perforated column is mounted on a floor support and the seat is fixed to the upper part of the column, with the use of special adaptors (support, flange). The costs of air conditioning equipment, the air duct system and air system accessories are considerably reduced, due to the lower quantity of primary air required.



- Comfortable air conditioning
- Creates a micro-climate
- Low amounts of fresh air
- Models may or may not support a seat
- Low amounts of primary air
- Low visibility

#### **Areas of Application**

- Theatres
- Concert halls
- Auditoriums
- Convention halls
- Cinemas





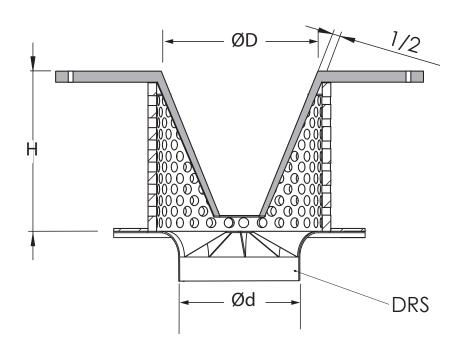
### **Configuration and dimensions**

## Configuration

The INDUCTO floor diffuser distributes fresh air through the diffusion column under the seat, from the supply system situated below the floor.

The standard color is black (RAL 9005), though other colors are available from the RAL color chart.

#### **Dimensions**



H - Hight :					
	150 mm (6 in)				
	203 mm (8 in)				
ØD - Secondary air inlet					
	150 mm (6 in)				
	203 mm (8 in)				
	255 mm (10 in)				
Ød - New air inlet					
	100 mm (4 in)				
	125 mm (5 in)				
180 mm (7 in)					



#### Mode of operation

The INDUCTO diffuser which pushing air through a column, which may or may not support a seat, is supplied by the air supply system installed below the structural floor.

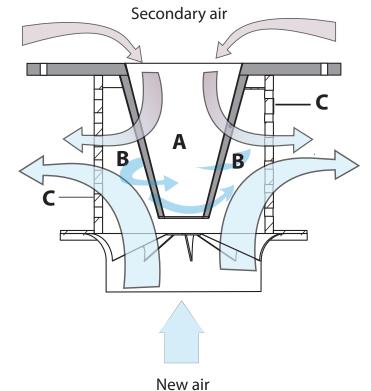
The vacuum effect developed at the base of the diffuser by the blown air's helical movement draws secondary air into the cone situated in the diffuser's center. (A)

The room's secondary air is sucked into the cone via an opening situated between the seat and the diffuser. The air is then directed into the diffuser's swirl chamber (B) and is mixed with fresh air, and subsequently is conveyed across the diffusion grill (C). This procedure creates a more homogenous airflow.

The floor and seating installation are carried out following the specific installation instructions provided.

The INDUCTO enables a diffusion of low quantities of primary air, with higher differences in temperature between the room and the air feed supply. The room's secondary air, mixed with fresh air, doubles the quantity consequently reducing the temperature difference and eliminating the creation of air currents.

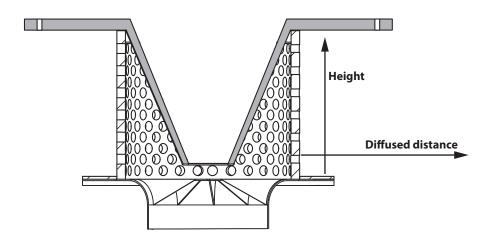
Research on comfort criteria has shown the level of comfort is only a 3°C variation between user's head and feet. The NAD Klima INDUCTO attains a temperature difference from 2°C to 2.5°C between the head and feet.



Secondary air 22,7 °C 21,4 °C 20,5 °C



#### Performances



#### **Basic datas**

Air flow:  $47 \text{ m}^3/\text{h}$  (27.6 cfm)

Inducted air flow : 7.65 m $^3$ /h (4.50 cfm) Diffused air flow : 54.6 m $^3$ /h (32.1 cfm) Supplied air temperature : 19  $^{\circ}$ C

	0		76 (3)		152 (6)		
	Velocity m/s (fpm)	Temperature °C	Velocity m/s (fpm)	Temperature °C	Velocity m/s (fpm)	Temperature °C	
0	0.42 (84)	19.2	0.18 (36)	20.5	0.02 (4)	21.2	
25.40 (1)	0.42 (84)	19.2	0.23 (46)	20.5	0.06 (12)	21.3	
50.80 (2)	0.44 (88)	19.2	0.26 (52)	20.5	0.09 (18)	20.9	
76.00 (3)	0.44 (88)	19.2	0.31 (62)	20.4	0.16 (32)	20.7	
101.6 (4)	0.50 (100)	19.2	0.42 (84)	19.9	0.35 (70)	20.0	
127.0 (5)	0.83 (163)	19.2	0.66 (122)	19.8	0.56 (112)	20.0	
152.4 (6)	0.92 (184)	19.2	0.81 (162)	19.9	0.68 (136)	19.9	



#### **Specifications**

#### 1 - Description and physical characteristics

- 1.1 The NAD Klima INDUCTO air diffuser shall be made of steel that can support a seat and its occupant.
- 1.2 The diffuser shall be designed to be mounted under a seat and to be supply from the floor.
- 1.3 It shall be made up of a vertical column, a central secondary air suction cone and a circular air diffusion grill.
- 1.4 The model shall be available in matte black (00SB) Other colors shall be available from the RAL chart.

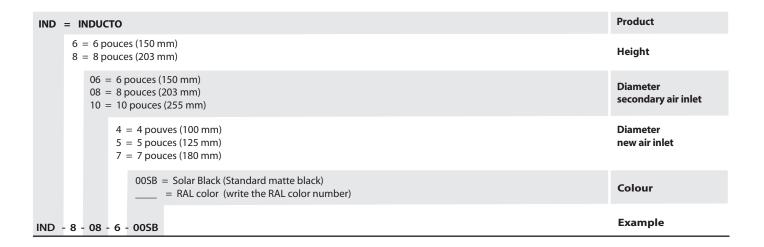
#### 2 - Performance

- 2.1 The INDUCTO air diffuser shall have a lower evacuation speed than the normal parameters of the DIN 1946, page 2.
- 2.3 The variation in temperature shall be less than 2.5°C between the user's head and feet.

#### 3 - Installation

- 3.1 The floor and seating installation in this case shall be made following specific instructions supplied by NAD Klima.
- 3.2 When the diffuser is being installed under the seat, special adaptors (support and flange) shall be required. (support and flange available from NAD Klima)
- 4 Quality required: NAD Klima, INDUCTO model

#### Codification





# www.nadklima.com

NAD Klima (Head office)
144, rue Léger,
Sherbrooke, QC, J1L 1L9 Canada
T: 819 780-0111 • 1 866 531-1739
F: 819 780-1660s
info@nadklima.com

#### **NAD Klima Ontario**

2840, Argentia Road, Unit 6, Mississauga, ON, L5N 8G4 Canada T: 416-860-1067 ontario@nadklima.com

