



# SAL 50 Submittal



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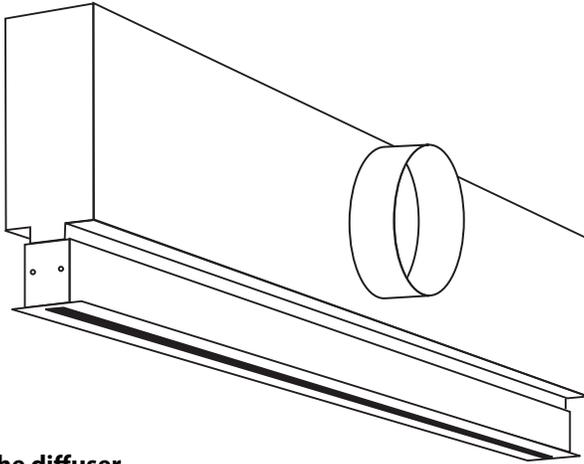
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Date

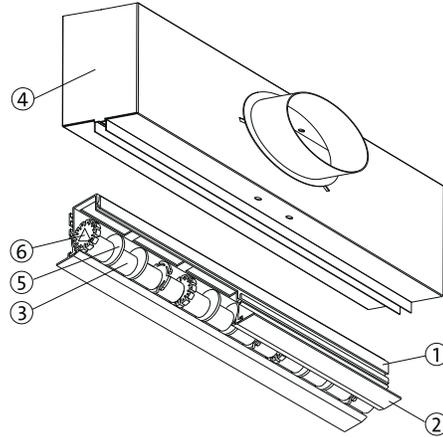
Project

Engineer

Contractor



## Configuration



- ① Extruded aluminum profile
- ② Wide or narrow finishing profile
- ③ Eccentric rollers
- ④ Plenum
- ⑤ Air guiding blades
- ⑥ Display and adjustment dial.

### The diffuser

- Made of aluminum profiles
- The 150 mm long eccentric rollers allows an adjustment of the air flow pattern over 180 degrees.
- Adapted to fit regular suspended ceilings or classic gypsum ceilings or wall installation.
- Powder coated with a polyester TGIC-free paint.
- Standard colour from the RAL colour chart choose by client.

### Le plenum

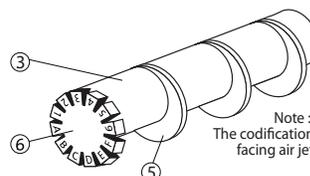
- Made and tagged by the diffuser's manufacturer
- Made from 24 gauge galvanized steel.
- Plenum include a perforated stabilizing (equalizing) plate.
- Hung with 4 points.
- Adhering to paraseismic standards.
- The inlet shall be centered on the side or on the top of the plenum.
- Calibrated to accommodate the airflow rate.
- Sealed with VOC (volatile organic compounds) emission-free caulking.
- Radial or axial balancing damper available and adjustable through the finished side of the front plate, in order to adjust the air volume.

The SAL linear diffuser slots are composed of extruded aluminum (1) with additional wide or narrow finishing profiles (2), eccentric rollers (3), which can rotate on 360 degrees and a plenum (4).

The 150 mm long eccentric rollers (3) offer a low acoustic level and optimal aerodynamics. They possess on their axis multiple air guiding planes (5), a display and adjustment dial (6) on which are alphanumeric characters, allowing the user to define and reproduce the roller settings.

The profiles are attached to the plenum with screws for suspended ceilings and with central screws for gypsum ceilings.

### Eccentric roller



Note :  
The codification  
facing air jet

# SAL 50 - Adjusting of the air jet direction

## Mode of operation

The eccentric rollers form, combined with aluminum air guiding slots, an optimal air flow.

The positioning of the eccentric rollers allows an adjustment of the air jet's direction, with or without reduction in the exit area.

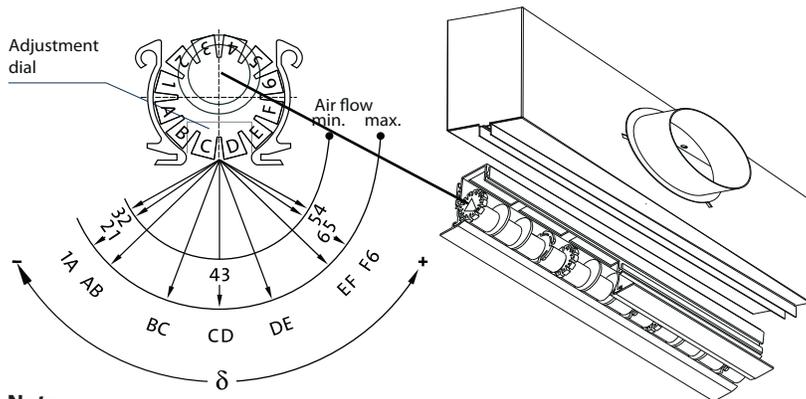
## Adjustment of the air jet direction

Thanks to the shape of eccentric rollers and adjustment dial with alphanumeric characters, the direction of the air jet 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 B.

During manufacturing, rollers are normally set alternately in position 21 and 65 (diffusion mode).

Figure A

## Controlling the direction of airflow



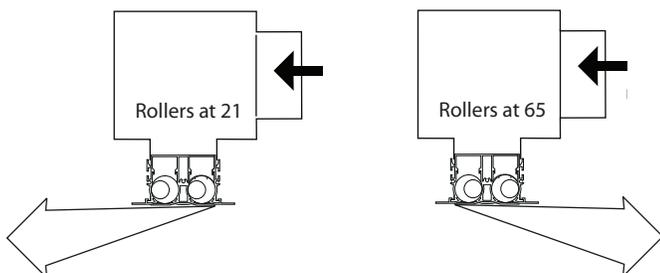
### Notes :

The adjustable side of the roller must be to the left of the collar.  
During assembly, the NAD label is placed on the same side as the collar of the plenum.

When the air inlet is on the top or a wall installation, follow the directions on the workshop design.

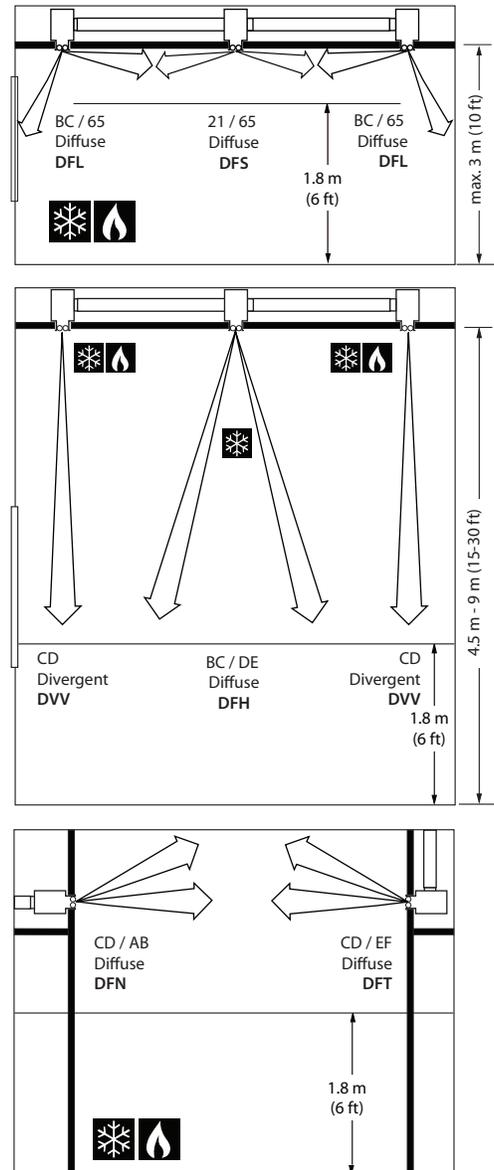
Figure B

## Air jet on one direction



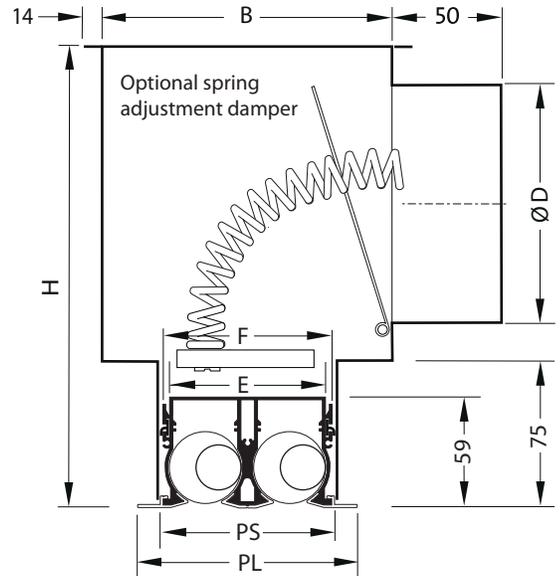
## Exemples d'application

The diagrams below illustrate the different relationships between the position of the eccentric rollers and the air jet's direction at the roller's outlet.



## SAL 50 - Dimensions

Number of slots	300 > 600	750 > 900	950 > 1500	1550 > 1950		
1	Size B	101	101	101	101	
	Size H	327	327	327	327	
	Size E	37	37	37	37	
	Size F	45	45	45	45	
	Size PS	49	49	49	49	
	Size PL	73	73	73	73	
	Size D	Side	125	150	200	2 X 150
		Top	125 (oval)*	150 (oval)*	200 (oval)*	2 X 150 (oval)*
Inlet	1	1	1	2		
2	Size B	145	145	145	145	
	Size H	377	377	377	377	
	Size E	82	82	82	82	
	Size F	89	89	89	89	
	Size PS	93	93	93	93	
	Size PL	117	117	117	117	
	Size D	Side	150	200	250	2 X 200
		Top	150 (oval)*	200 (oval)*	250 (oval)*	2 X 200 (oval)*
Inlet	1	1	1	2		
3	Size B	190	190	190	190	
	Size H	392	392	392	392	
	Size E	127	127	127	127	
	Size F	134	134	134	134	
	Size PS	138	138	138	138	
	Size PL	162	162	162	162	
	Size D	Side	200	250	302	2 X 250
		Top	200 (oval)*	250 (oval)*	302 (oval)*	2 X 250 (oval)*
Inlet	1	1	1	2		
4	Size B	236	236	236	236	
	Size H	429	429	429	429	
	Size E	171	171	171	171	
	Size F	178	178	178	178	
	Size PS	182	182	182	182	
	Size PL	206	206	206	206	
	Size D	Side	200	250	302	2 X 250
		Top	200	250 (oval)*	302 (oval)*	2 X 250 (oval)*
Inlet	1	1	1	2		



The optional balancing damper is adjustable by the diffuser.

**\* Note:** In order to install a radial damper, the plenum will be oversized by 2 inches in relation to the inlet, to allow room on top for a round inlet instead of an oval one

**SAL 50 - Codification**

<b>SAL 50</b>										<b>Product</b>			
0300, 0600, 0750, 0900, 1050, 1200, 1350, 1500, 1650, 1800, 1950										<b>Length of diffuser</b>			
1, 2, 3, 4										<b>Number of slots</b>			
DFS = Standard diffuse 21 / 65 DFL = Window diffuse BC / 65 DFR = Window diffuse DE / 21 DFH = Diffuse height BC / DE DFE = Diffuse window (max. 4 m) BC / EF DFF = Diffuse AB / EF DFN = Diffuse CD / AB DFT = Diffuse CD / EF DVB = Divergence 21 DVD = Divergence 65 DVM = Wall divergence DE (jet towards the ceiling) DVV = Vertical divergence CD										<b>Air flow</b>			
PL2 = Wide profile with end cap in "L" shape on both sides PLL = Wide profile with end cap in "L" shape on left side PLR = Wide profile with end cap in "L" shape on right side PLP = Wide profile without an end cap (with pins) PS2 = Narrow profile with flat end cap on two sides PSL = Narrow profile with flat end cap on left side PSR = Narrow profile with flat end cap on right side PSP = Narrow profile without end cap (with pull pins)										<b>Profile and end cap</b>			
W = White (RAL 9003) C = Cream (RAL 9010) B = Black										<b>Colour of eccentric rollers</b>			
9003 = White 9010 = Cream 00SB = Solar black (Standard matte black) 00SM = Silver matte (Standard metallic gray) _____ = RAL color (indicate colour number)										<b>Diffuser colour</b>			
S = Plenum with inlet on the side T = Plenum with inlet on the top X = Without plenum										<b>Plenum</b>			
I = With acoustic insulation A = With closed cell acoustic insulation X = Without insulation										<b>Acoustic insulation</b>			
F = With fireproof insulation and fireproof dampers (balancing damper not available) X = Without fireproof insulation and fireproof dampers										<b>Fireproof insulation</b>			
D = With spring damper R = With radial damper ** X = Without damper										<b>Balancing damper</b>			
G = Gypsum ceiling W = Wall X = Suspended ceiling R = Return Grille (SAL 50 without connection plenum)										<b>Type of installation</b>			
<b>SAL</b>	<b>50</b>	<b>0300</b>	<b>1</b>	<b>DFS</b>	<b>PL2</b>	<b>B</b>	<b>9003</b>	<b>S</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>Example</b>

Notes : \*\* Not available on oval collar