



Diffusers for system ceilings type PS/PRN (RAL9010)

Round ceiling diffusers with fixed diffusion rings in plate for system ceiling 600 X 600

Application

- For air supply and exhaust in ventilation and air conditioning systems

Material

- Aluminium and steel combination

Colour

- White, RAL 9010

Composition

- fixed diffusion rings

Mounting

- Fixing directly on the collar

Accessories

- Butterfly volume control damper for mounting on the neck of the diffuser, type DR

Text for tender

- The circular ceiling diffusers have fixed diffusion blades. They are made of steel and aluminium with white powdercoating finish RAL 9010 and supplied with a volume control damper .
- **Cairox type PS/PRN+DR**

Order example

- **PS/PRN, 200 + DR**

Explanation

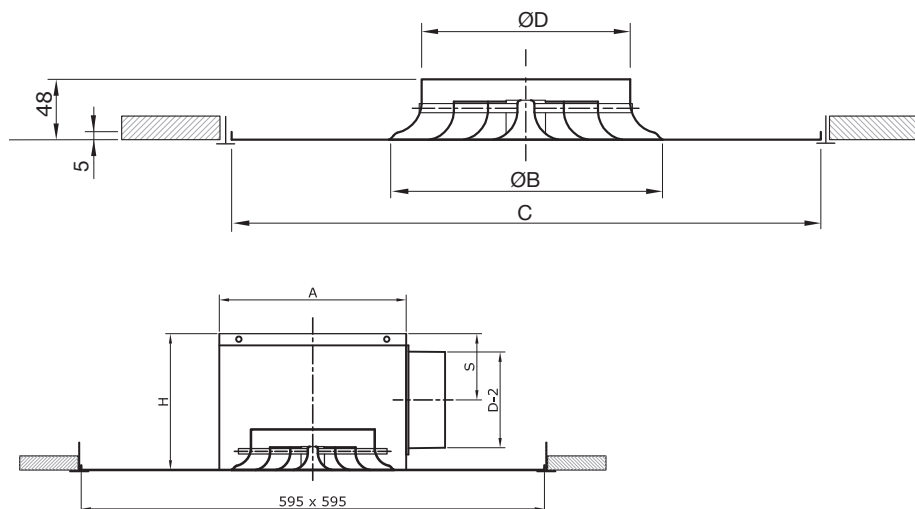
PS/PRN = Diffuser type

200 = Diffuser size (Ø diffuser neck connection)

Accessories

DR = Damper

160 = Plenumbox connection diameter 160



Dimensions			
PS/PRN	C [mm]	ØB [mm]	ØD [mm]
150	595	210	159
200	595	260	199
250	595	300	249
300	595	350	314

Quick selection						
Q	PRN	150	200	250	300	350
100	Ak	0.009	0.014	0.02	0.028	0.036
	Vk	3.2				
	X0,25	0.7				
	Ps	4				
	Lw(A)					
150	Vk	4.8	3			
	X0,25	1.1	0.9			
	Ps	9	4			
	Lw(A)					
200	Vk	6.4	4	2.8		
	X0,25	1.5	1.2	1		
	Ps	16	6	3		
	Lw(A)	29		<20		
300	Vk	9.6	6	4.1	3	
	X0,25	2.2	1.8	1.5	1.3	
	Ps	37	15	7	4	
	Lw(A)	43	29			
400	Vk	12.8	8	5.5	4	
	X0,25	3	2.4	2	1.7	
	Ps	65	26	12	6	
	Lw(A)	53	39	27		
500	Vk		10	6.9	5	3.8
	X0,25		3	2.4	2.1	1.8
	Ps		40	19	10	6
	Lw(A)		47	35	25	<20
600	Vk			8.3	6	4.6
	X0,25			2.9	2.5	2.2
	Ps			27	14	8
	Lw(A)			41	32	23
700	Vk			9.6	7	5.3
	X0,25			3.4	2.9	2.5
	Ps			37	20	11
	Lw(A)			47	37	29
800	Vk				8	6.1
	X0,25				3.3	2.9
	Ps				26	15
	Lw(A)				42	33
900	Vk				9	6.9
	X0,25				3.8	3.3
	Ps				33	19
	Lw(A)				46	38
1000	Vk					7.6
	X0,25					3.6
	Ps					23
	Lw(A)					41

Symbols and specifications

- Q = Air Volume in m³/h
- Ak = Effective surface (free area) in m²
- B = Distance between diffusers in m
- H = Installation height of the diffusers in m
- Vz = Maximum velocity at the occupied zone regarding distance between diffusers and installation height in m/s
- Vk = Average effective velocity through the grill in m/s
- X0,25 = Throw length in m at an endvelocity Vt of 0,25m/s
- Ps = Static pressure loss given in Pa
- Lw(A) = Acoustic power in dB(A)

- The throw X0.25 is given at an end velocity of 0.25m/s for a smooth ceiling without any obstacles.
- The values are given for isothermal supply air. Throw distances for cooling conditions at -11K can be calculated by deviding the X0.25 values with factor 1.1. For heating purposes at Dt of +11K a multiplier of 1.1 should be applied to the given X0.25 value.
- In order to achieve a high comfort level, selections can be made according to the maximal velocity at the occupied zone Vz. These values are given at distances between diffusers B and installation heights H. Velocities Vz lower than, or equal to 0,25m/s at the occupied zone are advised.
- The pressure losses Ps are given for grilles without damper of with fully opened damper.
- The acoustic power Lw(A) are given for grilles without damper of with fully opened damper without room attenuation. Acoustic powers below 20dB(A) are mentioned as "<20" in the tables.
- For all special requirements, please contact our engineering office.