

**CNC-1A
(RAL9010)**

- Circular nozzle diffusers
- Circular
- Steel and plastic
- White, RAL 9010



Circular nozzle diffusers with circular pattern type CNC-1A (RAL9010)

Multinozzle ceiling diffusers with high induction rate, consisting of a circular plate with individual adjustable nozzles arranged in a circular pattern to be equipped with galvanized steel plenum box.

Application

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

Material

- Steel and plastic composite combination

Colour

- White, RAL 9010

Composition

- Frontplate made of powder coated steel
- Nozzles made out of plastic composite
- Central screw mounting

Mounting

- Fixing by central screw in the crossbar of the plenum box.

Accessories

- Circular plenum box **RER-B**
- Circular insulated plenum box **RER-B ISO**
- Regulating valve for plenum box type **CRC**

Text for tender

- The air supply ceiling diffusers are circular with a circular arranged nozzle pattern. They are made of a steel powdercoated frontplate in white finish RAL 9010 and nozzles in plastic composite materials. The diffusers are standard delivered with galvanized steel plenumbox equipped with perforated plate and damper in the side entry spigot. The diffuser is centrally screw mounted.
- **Cairox type CNC-1A**

Order example

- **CNC-1A, 600 + RER-B 600 + CRC 250**

Explanation

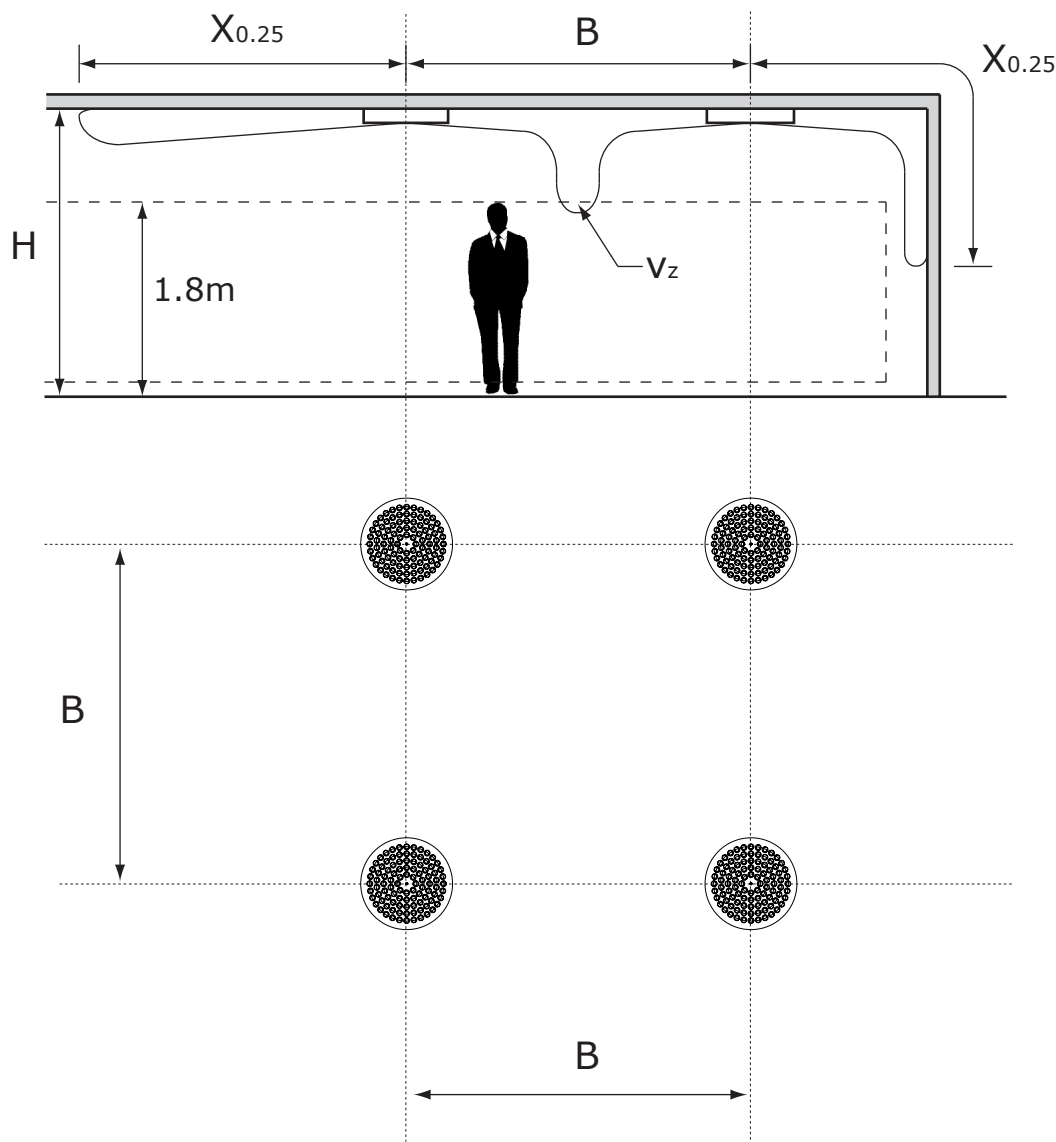
CNC-1A = Diffuser type

600 = Diffuser size

Accessories

RER-B = Plenum box

600 = Size plenum box
CRC = Regulating valve for plenum box
250 = Plenum box connection diameter 250



CNC-1A	Dimensions	
	ØA [mm]	# Nozzles
300	300	22
400	400	42
500	500	68
600	600	100
625	625	100

CNC 1A - #Nozzles				Quick selection											
Q	Ak			300 - #22			400 - #42			500 - #68			600 - #100 / 625 - #100		
	0.0057			0.0114			0.0153			0.0258					
	B	H=		1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6
50	Vz	H= 2.7	0.3	0.12	0.06	0.25	0.1	0.05							
		H= 3.2	0.14	0.07	0.04	0.12	0.06	0.03							
		H= 3.8	0.07	0.04	0.02	0.06	0.03	0.02							
	Vk		2.4			1.2									
	X0,25		1.6			1.5									
	Ps		6			2									
75	Lw(A)		24			<20									
	Vz	H= 2.7	0.42	0.19	0.11	0.34	0.15	0.08	0.32	0.14	0.08				
		H= 3.2	0.22	0.12	0.07	0.17	0.09	0.06	0.16	0.08	0.05				
		H= 3.8	0.12	0.07	0.05	0.09	0.06	0.04	0.08	0.05	0.03				
	Vk		3.7			1.8			1.4						
	X0,25		1.8			1.7			1.6						
100	Ps		13			4			2						
	Lw(A)		33			<20			<20						
	Vz	H= 2.7	0.53	0.27	0.16	0.42	0.2	0.12	0.38	0.18	0.1	0.3	0.13	0.07	
		H= 3.2	0.29	0.17	0.11	0.22	0.13	0.08	0.2	0.11	0.07	0.15	0.08	0.05	
		H= 3.8	0.17	0.11	0.08	0.13	0.08	0.05	0.11	0.07	0.05	0.08	0.05	0.03	
	Vk		4.9			2.4			1.8			1.1			
150	X0,25		2.1			1.9			1.8			1.6			
	Ps		24			7			4			2			
	Lw(A)		38			23			<20			<20			
	Vz	H= 2.7				0.58	0.3	0.19	0.51	0.26	0.16	0.39	0.18	0.11	
		H= 3.2				0.33	0.2	0.14	0.29	0.17	0.11	0.21	0.12	0.07	
		H= 3.8				0.2	0.14	0.1	0.17	0.11	0.08	0.12	0.07	0.05	
200	Vk					3.7			2.7			1.6			
	X0,25					2.3			2.1			1.8			
	Ps					16			9			3			
	Lw(A)					33			27			<20			
	Vz	H= 2.7				0.71	0.4	0.26	0.63	0.34	0.22	0.49	0.25	0.15	
		H= 3.2				0.43	0.28	0.19	0.37	0.23	0.16	0.27	0.16	0.11	
H= 3.8					0.28	0.19	0.14	0.23	0.16	0.12	0.16	0.11	0.08		
250	Vk					4.9			3.6			2.2			
	X0,25					2.7			2.4			2			
	Ps					28			16			6			
	Lw(A)					40			34			23			
	Vz	H= 2.7							0.74	0.42	0.28	0.57	0.3	0.19	
		H= 3.2							0.46	0.3	0.21	0.33	0.2	0.14	
H= 3.8								0.3	0.21	0.16	0.2	0.14	0.1		
300	Vk								4.5			2.7			
	X0,25								2.8			2.3			
	Ps								25			9			
	Lw(A)								40			28			
	Vz	H= 2.7							0.85	0.5	0.34	0.64	0.35	0.23	
		H= 3.2							0.54	0.36	0.26	0.39	0.24	0.17	
H= 3.8								0.36	0.26	0.2	0.24	0.17	0.12		
350	Vk								5.4			3.2			
	X0,25								3.2			2.5			
	Ps								35			13			
	Lw(A)								45			33			
	Vz	H= 2.7										0.73	0.42	0.27	
		H= 3.2										0.45	0.29	0.21	
H= 3.8											0.29	0.21	0.16		
400	Vk											3.8			
	X0,25											2.8			
	Ps											18			
	Lw(A)											37			
	Vz	H= 2.7										0.79	0.47	0.31	
		H= 3.2										0.51	0.33	0.24	
H= 3.8											0.33	0.24	0.18		
450	Vk											4.3			
	X0,25											3			
	Ps											23			
	Lw(A)											41			
	Vz	H= 2.7										0.86	0.52	0.36	
		H= 3.2										0.56	0.38	0.28	
H= 3.8											0.38	0.28	0.21		
500	Vk											4.8			
	X0,25											3.3			
	Ps											29			
550	Lw(A)											44			

Symbols and specifications

- Q = Air volume in m³/h
- Ak = Effective surface (free area) in m²
- B = Distance between the diffusers in m
- H = Installation height of the diffusers in m
- Vz = Maximum velocity at the occupied zone according to distance between the diffusers and installation height in m/s
- Vk = Average effective velocity through the diffuser in m/s
- X0.25 = Throw length in m at an end velocity 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 dividing 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 diffusers without damper or with fully opened damper.

- The acoustic power values $L_w(A)$ are given for diffusers without damper or 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.