**PS/RWR-N
(RAL9005)**

- Swirl diffusers
- Square
- Steel
- Black, RAL 9005

Black swirl diffusers for suspended ceilings type PS/RWR-N (RAL9005)

Swirl diffusers for suspended ceilings with fixed blades

Brand

- Cairox

Application

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

Material

- Steel

Colour

- Black, RAL 9005
- Other colours available upon request

Composition

- Fixed blades

Mounting

- Fixing directly on the collar of the diffuser

Accessories

- Plenum box, type **RER-LB**
- Insulated plenum box, type **RER-LB ISO**
- Regulating valve for plenum box, type **CRC**
- Polystyrene plenum box, type **PPS-P** with duct connection **PPS-APD** and mounting bar **PPS-MB**

Order example

- **PS/RWR-N (RAL 9005), 315 + RER-LB + CRC 250**

Explanation

PS/RWR-N = Type diffuser

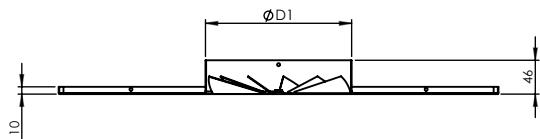
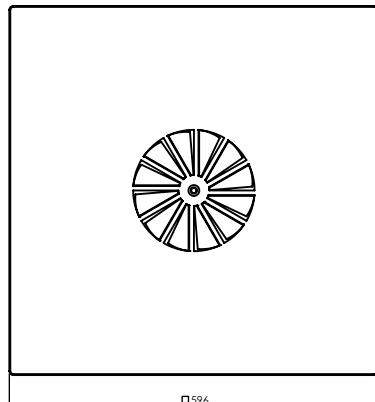
315 = Size diffuser (\varnothing diffuser neck connection)

Accessories

RER-LB = Plenum box

CRC = Regulating valve for plenum box

250 = Plenum box connection diameter 250



Dimensions		
PS/RWR-N	ØD1 [mm]	#Blades
125	123	8
160	158	10
200	198	12
250	248	14
315	313	16
355	353	17
400	398	18

Quick selection																						
PS/RWR-N		125			160			200			250			315			355			400		
Q	Ak	0.0099			0.0123			0.0176			0.0226			0.033			0.0359			0.05		
	B	1.2	2.4	3.6	1.2	2.4	3.6	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	0.08	0.05	0.04																	
		H= 3.2	0.06	0.04	0.04																	
		H= 3.8	0.04	0.04	0.03																	
	Vk		1.4																			
	X0,25		0.5																			
100	Ps		11																			
	Lw(A)		<20																			
	Vz	H= 2.7	0.15	0.11	0.08	0.14	0.1	0.08	0.11	0.08	0.06											
		H= 3.2	0.11	0.09	0.07	0.1	0.08	0.06	0.09	0.07	0.05											
		H= 3.8	0.09	0.07	0.06	0.08	0.06	0.05	0.07	0.05	0.05											
150	Vk		2.8			2.3			1.6													
	X0,25		0.9			0.8			0.7													
	Ps		45			19			6													
	Lw(A)		35			26			<20													
	Vz	H= 2.7	0.23	0.16	0.13	0.21	0.15	0.11	0.17	0.12	0.1	0.15	0.11	0.08								
200		H= 3.2	0.17	0.13	0.11	0.15	0.12	0.1	0.13	0.1	0.08	0.11	0.09	0.07								
		H= 3.8	0.13	0.11	0.09	0.12	0.1	0.08	0.1	0.08	0.07	0.09	0.07	0.06								
	Vk		4.2			3.4			2.4			1.8										
	X0,25		1.4			1.2			1			0.9										
	Ps		100			41			14			5										
300	Lw(A)		46			38			24			<20										
	Vz	H= 2.7	0.31	0.22	0.17	0.27	0.2	0.15	0.23	0.16	0.13	0.2	0.14	0.11	0.17	0.12	0.09	0.13	0.1			
		H= 3.2	0.23	0.18	0.14	0.21	0.16	0.13	0.17	0.13	0.11	0.15	0.12	0.09	0.13	0.1	0.08	0.07				
		H= 3.8	0.18	0.14	0.12	0.16	0.13	0.11	0.13	0.11	0.09	0.12	0.09	0.08	0.1	0.08	0.07					
	Vk		5.6			4.5			3.2			2.5			1.7		1.5					
400	X0,25		1.8			1.6			1.4			1.2			1		1.1					
	Ps		178			72			25			9			3		2					
	Lw(A)		54			46			32			22			<20		<20					
	Vz	H= 2.7													0.34	0.25	0.19	0.27	0.19			
		H= 3.2													0.26	0.2	0.15	0.23	0.16			
500		H= 3.8													0.2	0.16	0.11	0.13	0.11			
	Vk														0.26	0.2	0.13	0.17	0.11			
	X0,25														0.2	0.16	0.11	0.13	0.11			
	Ps														0.23	0.19	0.14	0.18	0.12			
	Lw(A)														0.23	0.2	0.17	0.23	0.16			
600	Vz	H= 2.7													0.4	0.29	0.22	0.36	0.26			
		H= 3.2													0.3	0.23	0.19	0.27	0.21			
		H= 3.8													0.23	0.19	0.16	0.21	0.14			
	Vk														4.9	3.4	3.1	4.2	2.2			
	X0,25														2.4	2	2.2	3	1.8			
800	Ps														35	12	8	27	23			
	Lw(A)														41	27	23	<20				
	Vz	H= 2.7													0.42	0.3	0.23	0.45	0.32			
		H= 3.2													0.31	0.24	0.2	0.34	0.26			
		H= 3.8													0.24	0.2	0.16	0.31	0.21			
1000	Vk														0.5	0.36	0.28	0.54	0.39			
	X0,25														0.38	0.29	0.24	0.4	0.26			
	Ps														0.29	0.24	0.2	0.31	0.21			
	Lw(A)														5.1	4.6	3.9	4.2	2.8			
															3	3.2	2.7	3	2.1			
															26	18	13	30	22			
															38	35	30	30	22			
															0.61	0.54	0.42	0.44	0.34			
															0.46	0.35	0.29	0.35	0.24			
															0.44	0.36	0.3	0.56	0.46			

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 $Lw(A)$ 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.

Placement instruction

