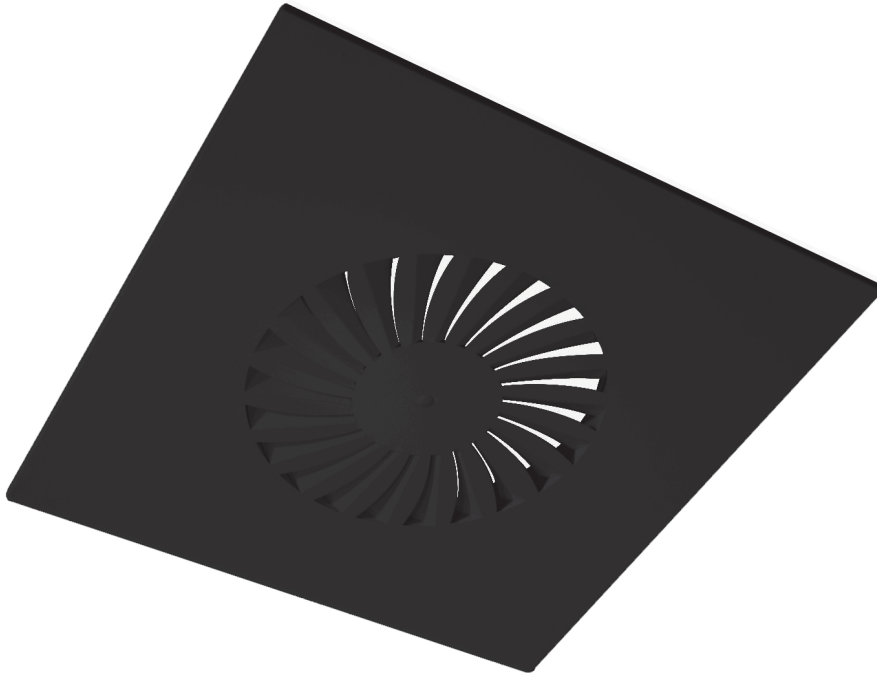


**PS/RWR-FCSA  
(RAL9005)**

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

**CAIROX**

## Black square swirl diffusers with fixed curved blades type PS/RWR-FCSA (RAL9005)

Swirl ceiling diffusers with high induction rate, consisting of a square plate for system ceiling with multiple fixed blades arranged in a circular pattern, to be equipped with galvanized steel plenum box.

**Brand**

- CAIROX

**Application**

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

**Material**

- Steel

**Colour**

- Colour black, RAL 9005
- Other colours available upon request

**Composition**

- Front plate made of powder coated steel
- Central screw mounting

**Mounting**

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

**Accessories**

- Square plenum box, type **REV-B**
- Square insulated plenum box, type **REV-B ISO**
- Circular plenum box, type **RER-B**
- Insulated circular plenum box, type **RER-B ISO**
- Regulating valve for plenum box, type **CRC**

**Text for tender**

- The ceiling swirl diffusers are square with fixed, curved blades with high induction power and horizontal discharge. The front grilles and blades are made of steel. The diffusers are powder-coated black in RAL 9005. They are mounted in an insulated or non-insulated round plenum by means of a central concealed screw

fixing. The galvanized steel plenums are provided with a perforated plate to obtain a homogeneous distribution over the grille and a flow regulator in the side connection.

■ Cairox type **RWR-FCSA (RAL9005) + RER-B(ISO) + CRC**

**Order example**

■ **PS/RWR-FCSA (RAL9005), 400 + RER-B 400 + CRC 200**

Explanation

**PS/RWR-FCSA (RAL9005)** = Diffuser type

**400** = Diffuser size

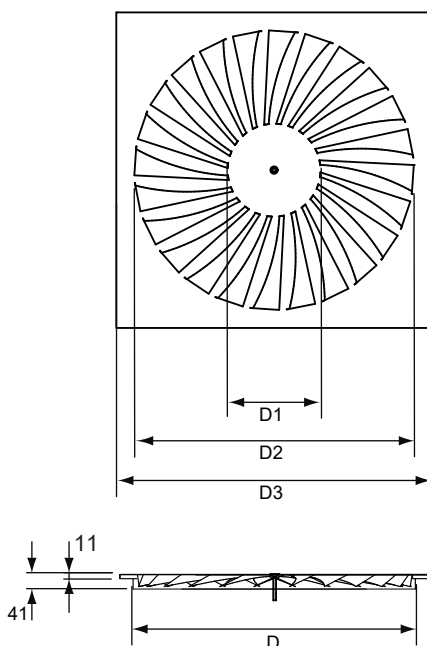
Accessories

**RER-B** = Plenum box type

**400** = Size plenum box

**CRC** = Regulating valve for plenum box

**200** = Plenum box connection diameter 200



	Dimensions				#Blades
	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	
PS/RWR-FCSA 300	238	100	236	596	28
PS/RWR-FCSA 400	338	150	336	596	30
PS/RWR-FCSA 500	438	150	436	596	32

		Quick selection								
PS/RWR-FCSA		300			400			500		
Q	Ak	0.023			0.03			0.0465		
	B	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6
100	Vz	H= 2.7	0.17	0.13	0.11					
		H= 3.2	0.14	0.11	0.09					
		H= 3.8	0.11	0.09	0.08					
	Vk	1.2								
	X0,25	0.9								
	Ps	7								
	Lw(A)	<20								
150	Vz	H= 2.7	0.26	0.2	0.16	0.23	0.18	0.15		
		H= 3.2	0.2	0.17	0.14	0.18	0.15	0.13		
		H= 3.8	0.17	0.14	0.12	0.15	0.13	0.12		
	Vk	1.8								
	X0,25	1.6								
	Ps	17								
	Lw(A)	26								
200	Vz	H= 2.7	0.34	0.26	0.21	0.29	0.23	0.2	0.21	0.17
		H= 3.2	0.27	0.22	0.19	0.24	0.2	0.17	0.17	0.15
		H= 3.8	0.22	0.19	0.16	0.2	0.17	0.15	0.15	0.13
	Vk	2.4								
	X0,25	2.2								
	Ps	30								
	Lw(A)	34								
250	Vz	H= 2.7	0.43	0.33	0.27	0.36	0.29	0.24	0.25	0.2
		H= 3.2	0.34	0.28	0.23	0.3	0.25	0.21	0.21	0.18
		H= 3.8	0.28	0.23	0.2	0.25	0.21	0.19	0.18	0.16
	Vk	3								
	X0,25	2.9								
	Ps	47								
	Lw(A)	41								
300	Vz	H= 2.7	0.51	0.39	0.32	0.43	0.34	0.28	0.29	0.24
		H= 3.2	0.41	0.33	0.28	0.35	0.29	0.25	0.25	0.21
		H= 3.8	0.33	0.28	0.24	0.29	0.25	0.22	0.21	0.18
	Vk	3.6								
	X0,25	3.7								
	Ps	67								
	Lw(A)	47								
400	Vz	H= 2.7				0.56	0.44	0.37	0.38	0.31
		H= 3.2				0.46	0.38	0.33	0.32	0.27
		H= 3.8				0.38	0.33	0.29	0.27	0.24
	Vk	3.7								
	X0,25	4.7								
	Ps	33								
	Lw(A)	39								
500	Vz	H= 2.7				0.69	0.54	0.46	0.46	0.38
		H= 3.2				0.56	0.47	0.41	0.39	0.33
		H= 3.8				0.47	0.41	0.36	0.33	0.29
	Vk	4.6								
	X0,25	6.4								
	Ps	51								
	Lw(A)	45								
600	Vz	H= 2.7							0.54	0.44
		H= 3.2							0.45	0.39
		H= 3.8							0.39	0.34
	Vk	3.6								
	X0,25	5.2								
	Ps	20								
	Lw(A)	34								
800	Vz	H= 2.7							0.7	0.49
		H= 3.2							0.59	0.5
		H= 3.8							0.5	0.44
	Vk	4.8								
	X0,25	7.9								
	Ps	35								
	Lw(A)	43								

**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

