PS/RWR-FCSA (RAL9016)

- Swirl diffusers
- Square
- Steel
- White, RAL 9016

Square swirl diffusers with fixed curved blades type PS/RWR-FCSA (RAL9016)

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
- Standard colour white, RAL 9016
- 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**

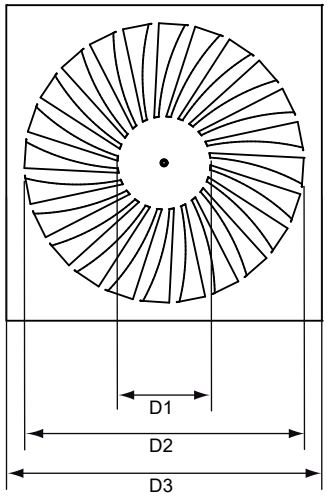
Text for tender

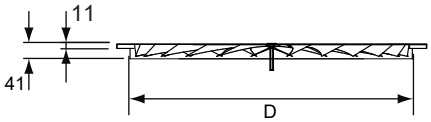
- The air supply ceiling diffusers are square with a circular arranged swirl with fixed curved blades. They are made of a steel powdercoated frontplate in white finish RAL 9016. The diffusers are standard delivered with galvanized steel plenumbox equipped with perforated plate and damper in the side entry spigot. The diffuser is centrally screw mounted.
- **Cairox** type **PS/RWR-FCSA + RER-B(ISO) + CRC**

Order example

- **PS/RWR-FCSA, 400 + RER-B 400 + CRC 200**

Explanation
PS/RWR-FCSA = 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					
	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	#Blades
PS/RWR-FCSA 300	238	100	236	596	16
PS/RWR-FCSA 400	338	150	336	596	22
PS/RWR-FCSA 500	438	150	436	596	24

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			1.4					
	X0,25				1.6			1.3					
	Ps				17			5					
	Lw(A)				26			<20					
200	Vz	H=	2.7	0.34	0.26	0.21	0.29	0.23	0.2	0.21	0.17	0.14	
		H=	3.2	0.27	0.22	0.19	0.24	0.2	0.17	0.17	0.15	0.13	
		H=	3.8	0.22	0.19	0.16	0.2	0.17	0.15	0.15	0.13	0.12	
	Vk				2.4			1.9			1.2		
	X0,25				2.2			1.9			1.1		
	Ps				30			8			2		
	Lw(A)				34			<20			<20		
250	Vz	H=	2.7	0.43	0.33	0.27	0.36	0.29	0.24	0.25	0.2	0.17	
		H=	3.2	0.34	0.28	0.23	0.3	0.25	0.21	0.21	0.18	0.16	
		H=	3.8	0.28	0.23	0.2	0.25	0.21	0.19	0.18	0.16	0.14	
	Vk				3			2.3			1.5		
	X0,25				2.9			2.5			1.5		
	Ps				47			13			3		
	Lw(A)				41			24			<20		
300	Vz	H=	2.7	0.51	0.39	0.32	0.43	0.34	0.28	0.29	0.24	0.2	
		H=	3.2	0.41	0.33	0.28	0.35	0.29	0.25	0.25	0.21	0.18	
		H=	3.8	0.33	0.28	0.24	0.29	0.25	0.22	0.21	0.18	0.17	
	Vk				3.6			2.8			1.8		
	X0,25				3.7			3.2			1.9		
	Ps				67			19			5		
	Lw(A)				47			30			<20		
400	Vz	H=	2.7				0.56	0.44	0.37	0.38	0.31	0.26	
		H=	3.2				0.46	0.38	0.33	0.32	0.27	0.24	
		H=	3.8				0.38	0.33	0.29	0.27	0.24	0.21	
	Vk							3.7			2.4		
	X0,25							4.7			2.9		
	Ps							33			9		
	Lw(A)							39			21		
500	Vz	H=	2.7				0.69	0.54	0.46	0.46	0.38	0.32	
		H=	3.2				0.56	0.47	0.41	0.39	0.33	0.29	
		H=	3.8				0.47	0.41	0.36	0.33	0.29	0.26	
	Vk							4.6			3		
	X0,25							6.4			4		
	Ps							51			14		
	Lw(A)							45			28		
600	Vz	H=	2.7							0.54	0.44	0.38	
		H=	3.2							0.45	0.39	0.34	
		H=	3.8							0.39	0.34	0.31	
	Vk										3.6		
	X0,25										5.2		
	Ps										20		
	Lw(A)										34		
800	Vz	H=	2.7							0.7	0.57	0.49	
		H=	3.2							0.59	0.5	0.44	
		H=	3.8							0.5	0.44	0.39	
	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 of with fully opened damper.
- The acoustic power values Lw(A) are given for diffusers 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.

Placement instruction