

**RWR-FCSA
(RAL9016)**

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



Circular swirl diffusers with fixed curved blades type RWR-FCSA (RAL9016)

Swirl ceiling diffusers with high induction rate, consisting of a circular plate with multiple fixed curved 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

- 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

- 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 round 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 white in RAL 9016. 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 (RAL9016) + RER-B(ISO) + CRC**

Order example

- **RWR-FCSA, 600 + RER-B 600 + CRC 250**

Explanation

RWR-FCSA = Diffuser type

600 = Diffuser size/swirl size

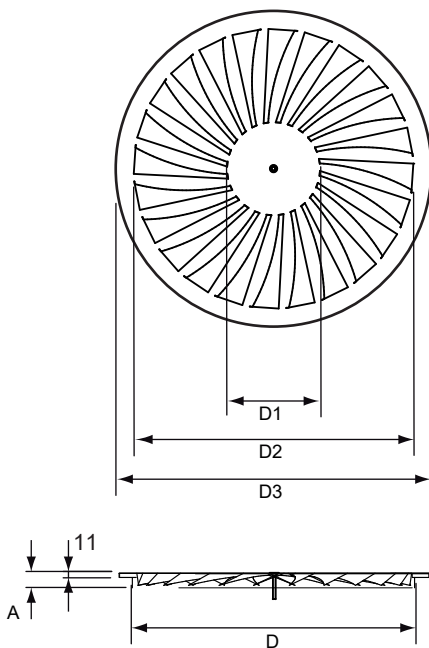
Accessories

RER-B = Type plenum box

600 = Size plenum box

CRC = Regulating valve for plenum box

250 = Plenum box connection diameter 250



	Dimensions					
	D [mm]	D1 [mm]	D2 [mm]	D3 [mm]	A	#Blades
RWR-FCSA 300	238	86	236	296	41	16
RWR-FCSA 400	338	140	336	396	41	22
RWR-FCSA 500	438	170	436	496	41	24
RWR-FCSA 600	538	170	536	596	22	24
RWR-FCSA 625*	538	170	536	621	22	24

* niet meer verkrijgbaar / n'est plus disponible / no longer available

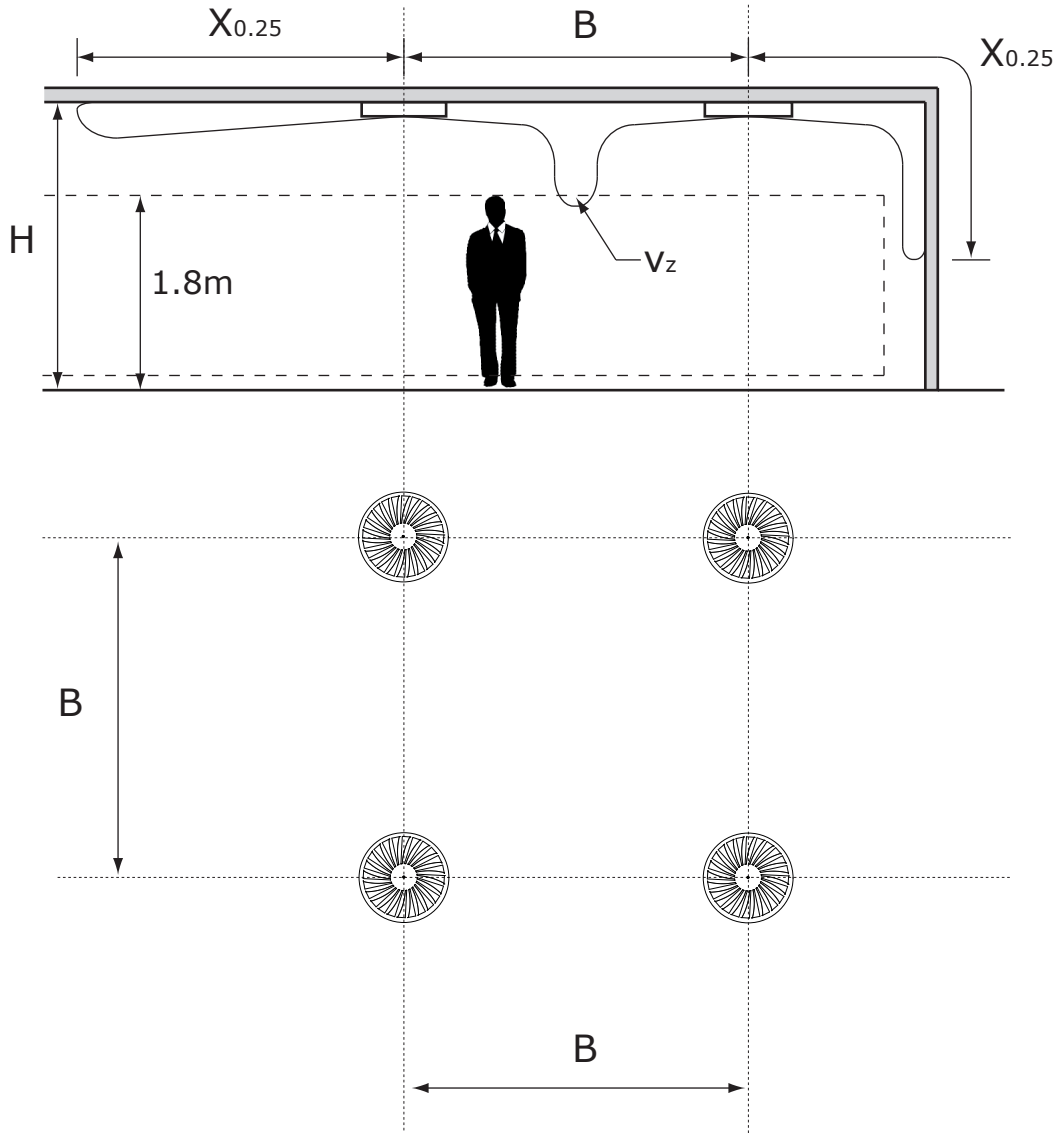
Quick selection																	
RWR-FCSA		300			400			500			600			625*			
Q	Ak	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	
100	Vz	H= 2.7	0.17	0.13	0.11												
		H= 3.2	0.14	0.11	0.09												
		H= 3.8	0.11	0.09	0.08												
	Vk		1.2														
	X0,25		0.9														
	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	0.22	0.17	0.15	0.13	0.12	0.15
		H= 3.2	0.41	0.33	0.28	0.35	0.29	0.25	0.25	0.21	0.18	0.18	0.15	0.13	0.12	0.15	0.13
		H= 3.8	0.33	0.28	0.24	0.29	0.25	0.22	0.21	0.18	0.17	0.17	0.15	0.13	0.12	0.15	0.13
	Vk		3.6			2.8				1.8							1.2
	X0,25		3.7			3.2				1.9							1.2
	Ps		67			19				5							2
	Lw(A)		47			30				<20						<20	
400	Vz	H= 2.7				0.56	0.44	0.37	0.38	0.31	0.26	0.29	0.24	0.2	0.29	0.24	0.2
		H= 3.2				0.46	0.38	0.33	0.32	0.27	0.24	0.24	0.24	0.2	0.18	0.16	0.2
		H= 3.8				0.38	0.33	0.29	0.27	0.24	0.21	0.21	0.2	0.18	0.16	0.2	0.18
	Vk					3.7				2.4					1.6		1.6
	X0,25					4.7				2.9					1.9		1.9
	Ps					33				9					4		4
	Lw(A)					39				21				<20		<20	
500	Vz	H= 2.7				0.69	0.54	0.46	0.46	0.38	0.32	0.37	0.3	0.25	0.37	0.3	0.25
		H= 3.2				0.56	0.47	0.41	0.39	0.33	0.29	0.31	0.26	0.22	0.31	0.26	0.22
		H= 3.8				0.47	0.41	0.36	0.33	0.29	0.26	0.26	0.22	0.2	0.26	0.22	0.2
	Vk					4.6				3					2		2
	X0,25					6.4				4					2.7		2.7
	Ps					51				14					6		6
	Lw(A)					45				28				<20		<20	
600	Vz	H= 2.7							0.54	0.44	0.38	0.45	0.36	0.3	0.45	0.36	0.3
		H= 3.2							0.45	0.39	0.34	0.37	0.31	0.27	0.37	0.31	0.27
		H= 3.8							0.39	0.34	0.31	0.31	0.27	0.24	0.31	0.27	0.24
	Vk								3.6					2.4		2.4	
	X0,25								5.2					3.6		3.6	
	Ps								20					9		9	
	Lw(A)								34				23		23		
800	Vz	H= 2.7							0.7	0.57	0.49	0.61	0.48	0.41	0.61	0.48	0.41
		H= 3.2							0.59	0.5	0.44	0.5	0.42	0.36	0.5	0.42	0.36
		H= 3.8							0.5	0.44	0.39	0.42	0.36	0.33	0.42	0.36	0.33
	Vk								4.8					3.2		3.2	
	X0,25								7.9					5.6		5.6	
	Ps								35					15		15	
	Lw(A)								43				32		32		
1000	Vz	H= 2.7										0.76	0.61	0.52	0.76	0.61	0.52
		H= 3.2											0.63	0.53	0.46	0.63	0.53
		H= 3.8											0.53	0.46	0.41	0.53	0.46
	Vk													4		4	
	X0,25													8		8	
	Ps													24		24	
	Lw(A)													39		39	

Symbols and specifications

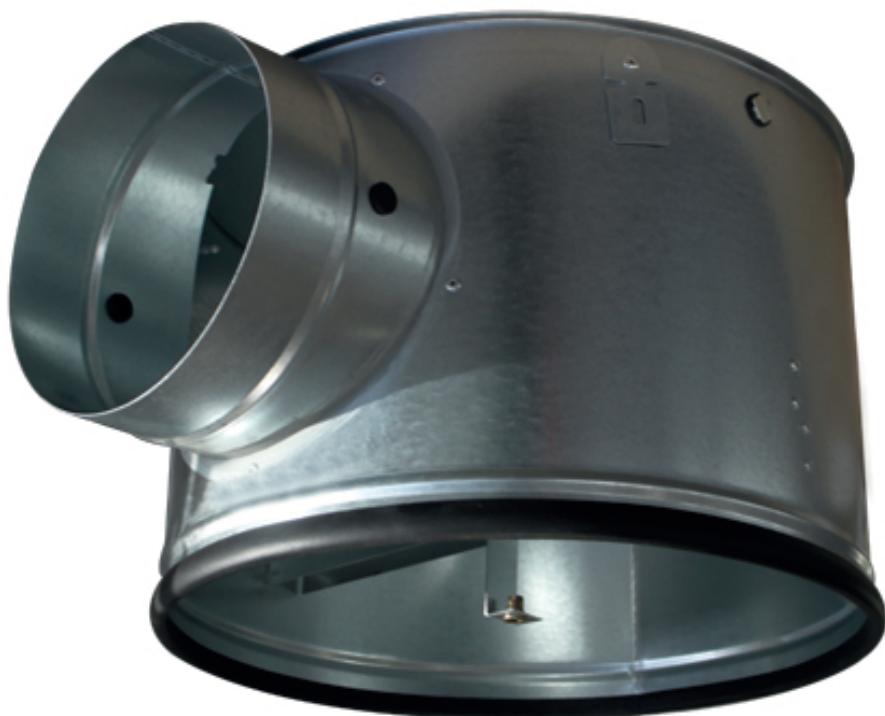
- Q = Air volume in m³/h
- Ak = Effective surface (free area) in m²
- B = Distance between the diffusers in m
- H = Installation height of the diffusers in m
- Vz = Maximum velocity at the occupied zone according to distance between the diffusers and installation height in m/s
- Vk = Average effective 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

Placement instruction



- Plenum boxes
- Circular
- Steel



Circular plenum box type RER-B

Universal circular plenum boxes with perforated plate in galvanized steel

Brand

- Cairox

Composition

- Circular body in plain steel plate
- Crossbar for central mounting with M6 screw of diffuser
- Perforated equalizing plate for equal air diffusion inside the box
- Circular connection spigot
- Seal for airtight connection with the diffuser

Accessories

- Circular volume control damper, type **CRC**

Order example

- **RER-B 600 + CRC 250**

Explanation

RER-B = Plenum box type

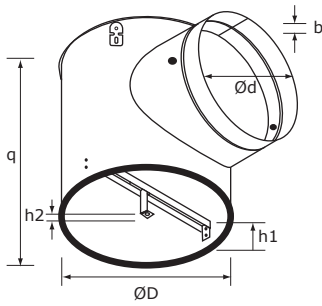
600 = Size type

Accessory

CRC 250 = Regulating valve for plenum box connection Ø250

Other available products

- Insulated plenumboxes type **RER-B ISO**



RER-B	Dimensions					
	ØD [mm]	q [mm]	Ød [mm]	b [mm]	$h1$ [mm]	$h2$ [mm]
300	275	230	160	15	65	10
400	375	270	200	15	65	10
500	476	270	200	15	65	10
600	576	320	250	15	65	10