

**RWR-2  
(RAL9016)**

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



## Circular swirl diffusers with fixed blades type RWR-2 (RAL9016)

Circular swirl ceiling diffusers with flat frame and fixed blades

### 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

- Fixed blades

### Mounting

- Fixing directly on the collar
- Fixing with central screw
- For the mounting of **RER-LB** and **RER-LB ISO**, the airtight connection between the diffuser and the plenum box is made halfway the upright collar of the diffuser. This is why the plenum box has to be installed at the right height before mounting the finishing grille.

### Accessories

- Plenum box, type **RER-LB**
- Insulated plenum box, type **RER-LB ISO**
- Regulating valve for plenum box, type **CRC**
- Mounting crossbar for direct duct mounting, type **FGN**
- Mounting crossbar for direct ceiling mounting, type **FHN**

### Text for tender

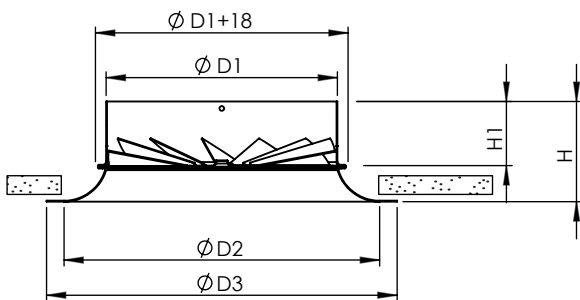
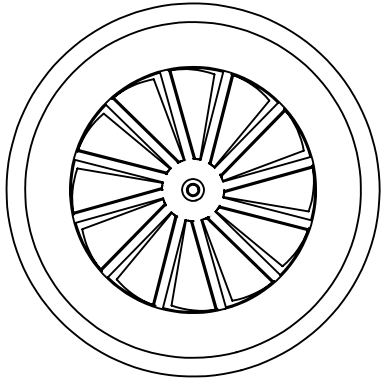
- The air supply diffusers are of the swirl type with a flat frame. They are made of steel with white powder coating RAL 9016 and supplied with a plenum box.
- **Cairox** type **RWR-2+RER-L**

**Order example**■ **RWR-2, 200 + RER-LB + CRC 250**

Explanation

**RWR-2** = Diffuser type**200** = Neck size of diffuser

Accessories

**RER-LB** = Plenum box**CRC** = Regulating valve for plenum box**250** = Plenum box connection diameter 250

RWR-2	ØD1 [mm]	ØD2 [mm]	ØD3 [mm]	H [mm]	H1 [mm]	#Blades
100	98	134	150	74	45	10
125	123	170	190	86	55	10
160	158	220	250	86	55	10
200	198	270	300	86	55	10
250	248	320	350	86	55	10
315	313	385	415	86	55	10
355	353	425	455	100	65	10

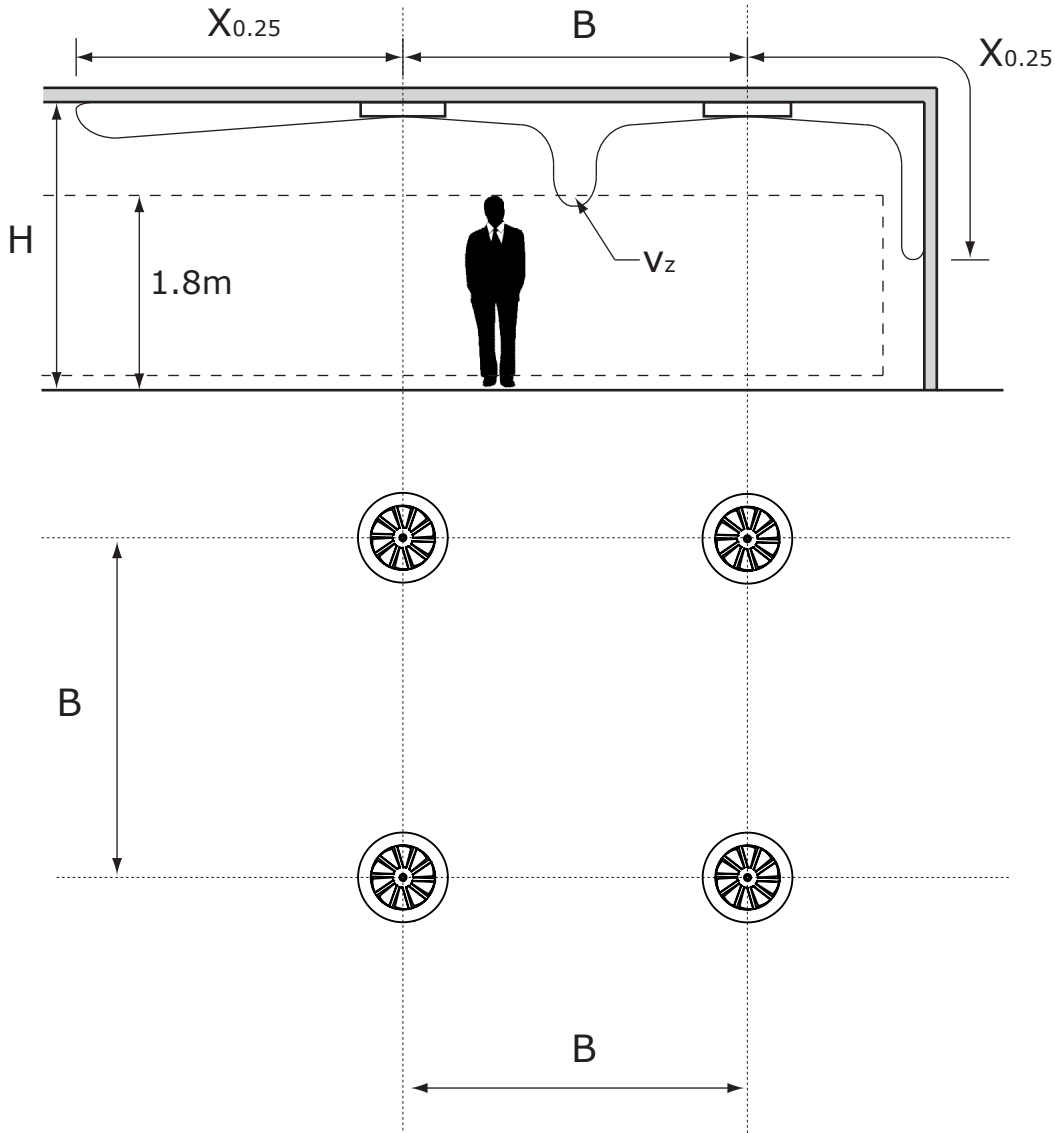
		Quick selection																						
RWR-2		100			125			160			200			250			315			355				
Q		0,0056			0,0086			0,0141			0,0224			0,0345			0,0537			0,0676				
Ak		1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6	1.2	2.4	3.6		
40	Vz	H= 2.7	0.51	0.25	0.15	0.28	0.13	0.07																
		H= 3.2	0.28	0.16	0.1	0.14	0.08	0.05																
		H= 3.8	0.16	0.1	0.07	0.08	0.05	0.03																
	Vk	2			1.3																			
	X0,25	2.1			1.6																			
	Ps	24			10																			
Lw(A)	25			<20																				
60	Vz	H= 2.7	0.77	0.38	0.22	0.4	0.18	0.1	0.31	0.14	0.08													
		H= 3.2	0.42	0.24	0.16	0.21	0.11	0.07	0.16	0.09	0.05													
		H= 3.8	0.24	0.16	0.11	0.11	0.07	0.05	0.09	0.05	0.04													
	Vk	3			1.9			1.2																
	X0,25	2.6			1.8			1.7																
	Ps	54			21			6																
Lw(A)	38			22			<20																	
100	Vz	H= 2.7				0.68	0.31	0.17	0.52	0.24	0.13	0.39	0.17	0.09										
		H= 3.2				0.35	0.19	0.12	0.26	0.14	0.09	0.19	0.1	0.06										
		H= 3.8				0.19	0.12	0.08	0.14	0.09	0.06	0.1	0.06	0.04										
	Vk				3.2			2			1.2													
	X0,25				2.3			2			1.8													
	Ps				59			17			5													
Lw(A)				38			30			<20														
150	Vz	H= 2.7							0.78	0.35	0.2	0.61	0.27	0.15	0.55	0.25	0.14							
		H= 3.2							0.4	0.21	0.13	0.31	0.16	0.1	0.28	0.15	0.09							
		H= 3.8							0.21	0.13	0.09	0.16	0.1	0.07	0.15	0.09	0.06							
	Vk				3			1.9			1.2													
	X0,25				2.4			2.2			2.1													
	Ps				37			13			5													
Lw(A)				43			25			<20														
200	Vz	H= 2.7									0.81	0.36	0.2	0.73	0.33	0.18	0.53	0.23	0.12					
		H= 3.2									0.4	0.22	0.13	0.37	0.2	0.12	0.26	0.14	0.08					
		H= 3.8									0.22	0.13	0.09	0.2	0.12	0.08	0.14	0.08	0.05					
	Vk				2.5			1.6			1													
	X0,25				2.4			2.4			2													
	Ps				23			9			3													
Lw(A)				33			21			<20														
250	Vz	H= 2.7									1	0.45	0.24	0.92	0.41	0.23	0.69	0.3	0.16	0.39	0.15	0.08		
		H= 3.2									0.5	0.27	0.16	0.46	0.25	0.15	0.34	0.18	0.11	0.18	0.08	0.05		
		H= 3.8									0.27	0.16	0.11	0.25	0.15	0.1	0.18	0.11	0.07	0.08	0.05	0.03		
	Vk				3.1			2			1.3													
	X0,25				2.7			2.6			2.3													
	Ps				35			14			5													
Lw(A)				40			27			<20														
300	Vz	H= 2.7												1.1	0.49	0.27	0.85	0.37	0.2	0.47	0.18	0.09		
		H= 3.2												0.55	0.3	0.18	0.42	0.22	0.13	0.21	0.1	0.06		
		H= 3.8												0.3	0.18	0.12	0.22	0.13	0.09	0.1	0.06	0.04		
	Vk				2.4			1.6			1.2													
	X0,25				2.8			2.5			1.9													
	Ps				20			8			7													
Lw(A)				32			<20			<20														
350	Vz	H= 2.7									1.28	0.57	0.32	0.96	0.42	0.22	0.55	0.22	0.11	0.63	0.25	0.12		
		H= 3.2									0.65	0.35	0.21	0.47	0.25	0.15	0.25	0.12	0.21	0.1	0.07	0.04		
		H= 3.8									0.35	0.21	0.14	0.25	0.15	0.1	0.12	0.07	0.12	0.07	0.04			
	Vk				2.8			1.8			1.4													
	X0,25				3			2.6			2													
	Ps				27			10			10													
Lw(A)				37			22			<20														
400	Vz	H= 2.7									1.47	0.66	0.36	1.11	0.49	0.26	0.63	0.25	0.12	0.83	0.32	0.16		
		H= 3.2									0.74	0.39	0.24	0.55	0.29	0.17	0.28	0.14	0.08	0.37	0.18	0.1		
		H= 3.8									0.39	0.24	0.16	0.29	0.17	0.11	0.14	0.08	0.05	0.18	0.1	0.06		
	Vk				3.2			2.1			1.6													
	X0,25				3.1			2.8			2.1													
	Ps				35			14			12													
Lw(A)				41			27			24														
500	Vz	H= 2.7														1.38	0.6	0.32	0.83	0.32	0.16			
		H= 3.2														0.68	0.36	0.21	0.37	0.18	0.1			
		H= 3.8														0.36	0.21	0.14	0.18	0.1	0.06			
	Vk				2.6			2.1			1.6													
	X0,25				3			2.3			2.1													
	Ps				21			21			21													
Lw(A)				35			34			34														

**Symbols and specifications**

- Q = Air volume in m<sup>3</sup>/h
  - Ak = Effective surface (free area) in m<sup>2</sup>
  - 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 boxes type RER-LB

Circular galvanized steel plenum box **RER-LB** with crossbar. To be combined with (PS)/RWR-N, VWR-N, RWR-2 and PRN

### Brand

- Cairox

### Application

- Connection of circular ductwork and circular diffusers
- Velocity reduction towards diffusers
- Diffuser mounting in plasterboard or false system ceilings

### Material

- Galvanized steel

### Composition

- Circular plenum box made out of galvanized steel
- Circular side entry spigot
- Mounted crossbar with M6 screw connection in the middle
- Rubber seal between plenum box and diffuser to make an airtight connection

### Accessories

- Circular regulating valve, type **CRC**

### Order example

- **RER-LB, 200 + CRC 160**

Explanation

**RER-LB** = Plenum box type

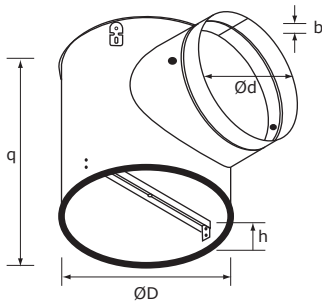
**200** = Size according to diffuser (Ø diffuser neck connection)

Accessory

**CRC 160** = Volume control damper for plenumbox connection Ø160

### Other available products

- Insulated plenum box type **RER-LB ISO**



Dimensions					
RER-LB	ØD [mm]	q [mm]	Ød [mm]	b [mm]	h [mm]
100	111	148	80	15	65
125	136	168	100	15	65
160	171	193	125	15	65
200	211	228	160	15	65
250	261	268	200	15	65
315	326	318	250	15	65
355	366	318	250	15	65
400	411	383	315	15	65
500	511	383	315	15	65