

**RWR-N
(RAL9010)**

- Swirl diffusers
- Circular
- Steel
- White, RAL 9010



Circular swirl diffusers with fixed blades type RWR-N (RAL9010)

Circular swirl ceiling diffusers with fixed blades

Application

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

Material

- Steel

Colour

- White, RAL 9010

Composition

- Fixed blades

Mounting

- Fixing with central screw into the crossbar of the plenum box

Accessories

- Plenum box, type **RER-LB**
- Insulated plenum box, type **RER-LB ISO**
- Regulating valve for plenum box, type **CRC**

Text for tender

- The air supply diffusers are of the swirl type with fixed blades. They are made of steel with white powder coating RAL 9010 and supplied with a volume control damper in the plenum box.
- Cairox type **RWR-N**

Order example

- **RWR-N, 315 + RER-LB**

Explanation

RWR-N = Diffuser type

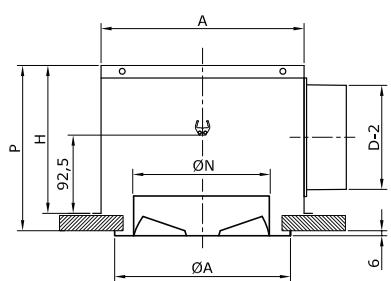
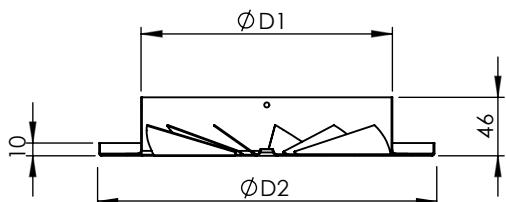
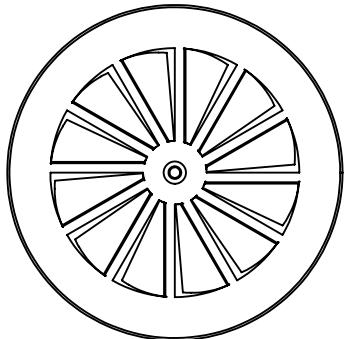
315 = Diffuser size (\varnothing diffuser neck connection)

Accessories

RER-LB = Plenum box

CRC = Regulating valve for plenum box

250 = Plenum box connection diameter



Dimensions			
RWR-N	ØD1 [mm]	ØD2 [mm]	#Lamele
125	123	171	8
160	158	214	10
200	198	264	12
250	248	326	14
315	313	404	16
355	353	448	17
400	398	500	18
500	498	596	20

Quick selection																										
RWR-N			125			160			200			250			315			355			400			500		
Q	Ak		0.0099			0.0123		0.0176		0.0226		0.033		0.0359		0.05		0.0618								
	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	0.08											
		H= 3.2	0.23	0.18	0.14	0.21	0.16	0.13	0.17	0.13	0.11	0.15	0.13	0.1	0.08											
		H= 3.8	0.18	0.14	0.12	0.16	0.13	0.11	0.13	0.1	0.09	0.12	0.09	0.08	0.07	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	0.3	0.22	0.17	0.25	0.18	0.14	0.27	0.19	0.15	0.23	0.16	0.13	0.11	0.09							
		H= 3.2	0.26	0.2	0.16	0.23	0.17	0.14	0.19	0.14	0.12	0.2	0.16	0.13	0.17	0.13	0.11	0.09								
500		H= 3.8	0.2	0.16	0.14	0.17	0.14	0.12	0.14	0.12	0.1	0.16	0.13	0.11	0.13	0.11	0.09									
	Vk		4.7			3.7			2.5			2.3			1.7											
	X0,25		2.1			1.8			1.5			1.6			1.4											
	Ps		54			20			6			4			2											
	Lw(A)		43			33			<20			<20														
600	Vz	H= 2.7	0.4	0.29	0.22	0.33	0.24	0.19	0.25	0.19	0.16	0.27	0.21	0.17	0.23	0.18	0.14	0.12	0.1							
		H= 3.2	0.3	0.23	0.19	0.25	0.19	0.16	0.27	0.21	0.17	0.23	0.18	0.14	0.12	0.14	0.11	0.09								
		H= 3.8	0.23	0.19	0.16	0.19	0.16	0.13	0.21	0.17	0.14	0.18	0.14	0.12	0.14	0.11	0.09									
	Vk		4.9			3.4			3.1			2.2			1.8											
	X0,25		2.4			2			2.2			1.8			1.4											
800	Ps		35			12			8			4			3											
	Lw(A)		41			27			23			<20			<20											
	Vz	H= 2.7	0.42	0.3	0.23	0.33	0.24	0.2	0.34	0.26	0.21	0.38	0.27	0.2	0.3	0.22	0.17	0.16	0.12							
		H= 3.2	0.31	0.24	0.2	0.3	0.24	0.2	0.27	0.21	0.17	0.23	0.18	0.14	0.12	0.22	0.17	0.14	0.12							
		H= 3.8	0.24	0.2	0.16	0.26	0.21	0.18	0.22	0.18	0.15	0.17	0.14	0.12	0.17	0.14	0.12	0.14	0.12							
1000	Vk		4.2			3.9			2.8			2.2			2.0											
	X0,25		2.5			2.7			2.3			1.8			1.6											
	Ps		18			13			7			4			6											
	Lw(A)		33			30			<20			22			<20											
	Vz	H= 2.7	0.5	0.36	0.28	0.54	0.39	0.3	0.46	0.33	0.25	0.35	0.25	0.2	0.35	0.25	0.2	0.27	0.22							
1200		H= 3.2	0.38	0.29	0.24	0.4	0.31	0.25	0.34	0.26	0.21	0.27	0.2	0.2	0.27	0.2	0.27	0.22	0.19							
		H= 3.8	0.29	0.24	0.2	0.31	0.25	0.21	0.26	0.21	0.18	0.22	0.18	0.15	0.17	0.14	0.12	0.14	0.12							
	Vk		5.1			4.6			3.3			2.7			2.1											
	X0,25		3			3.2			2.7			2.1			1.6											
	Ps		26			18			9			6			30		22									
1400	Lw(A)		38			35						22			17		28									
	Vz	H= 2.7	0.61	0.44	0.34	0.47	0.34	0.26	0.46	0.35	0.27	0.35	0.27	0.22	0.35	0.27	0.27	0.22	0.19							
		H= 3.2	0.46	0.35	0.29	0.35	0.27	0.22	0.37	0.27	0.21	0.34	0.27	0.22	0.34	0.27	0.27	0.22	0.19							
		H= 3.8	0.35	0.29	0.24	0.35	0.27	0.22	0.36	0.27	0.21	0.34	0.27	0.22	0.34	0.27	0.27	0.22	0.19							
	Vk		4.4			3.7			2.8			2.1			1.6											
1600	X0,25		3.7			3.2			2.7			2.1			1.6											
	Ps		16			11			11			11			11											
	Lw(A)		30			22			22			22			22											
	Vz	H= 2.7	0.76	0.54	0.42	0.59	0.42	0.33	0.59	0.42	0.33	0.59	0.42	0.33	0.59	0.42	0.33	0.59	0.42							
		H= 3.2	0.57	0.44	0.36	0.44	0.34	0.28	0.44	0.34	0.28	0.44	0.34	0.28	0.44	0.34	0.28	0.44	0.34							
1800		H= 3.8	0.44	0.36	0.3	0.44	0.34	0.28	0.44	0.34	0.28	0.44	0.34	0.28	0.44	0.34	0.28	0.44	0.34							
	Vk		5.6			4.6			4.6			3.5			3.5											
	X0,25		26			26			26			17			17											
	Ps		36			36			36			28			28											
	Lw(A)																									

Symbols and specifications

- Q = Air volume in m^3/h
- Ak = Effective surface (free area) in m^2
- 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 diff

- 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

