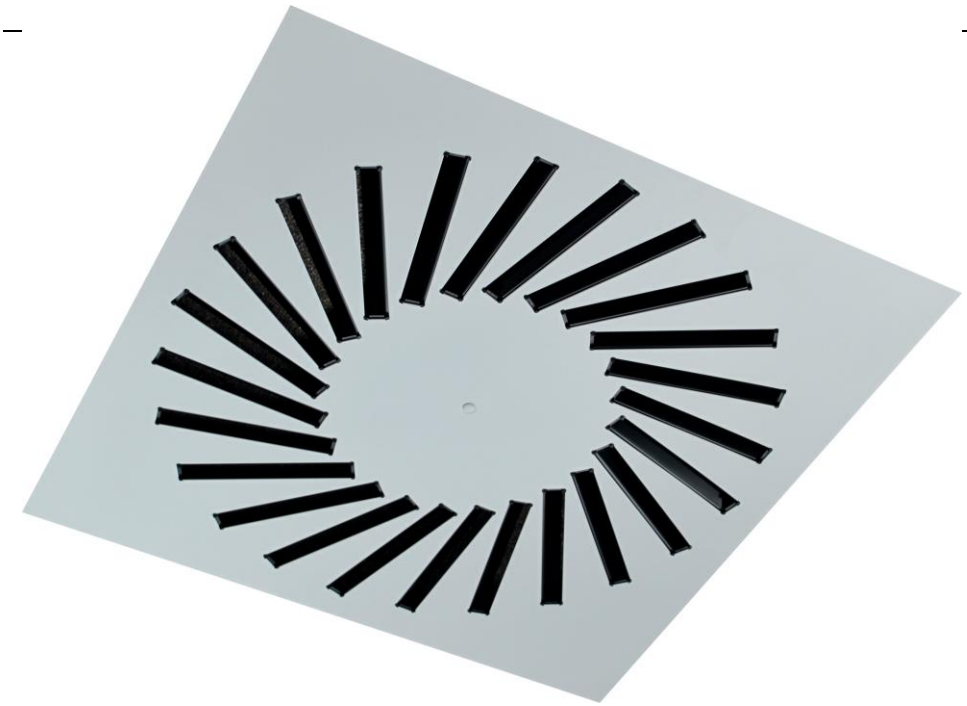
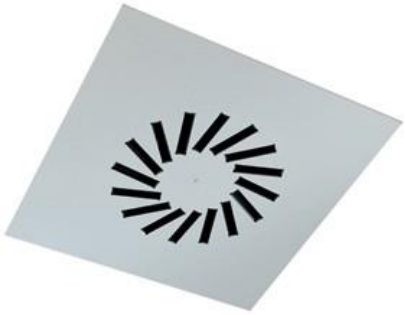
VWR-3A (RAL9016)

- Cairox
- Swirl diffuser
- Steel
- White, RAL 9016
- Adjustable Blades





Square swirl diffuser with adjustable blades type VWR-3A (RAL9016)

Square swirl ceiling diffusers with adjustable blades

Brand

- CAIROX

Application

- For air supply in ventilation and air conditioning systems.

Material

- Steel

Colour

- Standard colour white, RAL 9016 with black blades

Composition

- Square swirl ceiling diffuser made of steel. The radial blades are individually adjustable and are developed for optimal diffusion, ensuring an instant mixture of primary and secondary air. Types 400/16, 500/16, and 600/16 have 16 blades, the 600/24 model has 24 blades
- The first number (f.e. 400) represents the dimensions of the panel

Mounting

- Diffuser to be centrally mounted with conceiled M6 screw on the crossbar of a plenum box
- Black blades to be set to position (see drawing).
- Horizontal placement of blades for heating mode only
- All blades to be set identically at 45° angle for cooling and ventilation or in combination with heating

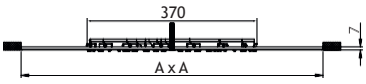
Accessories

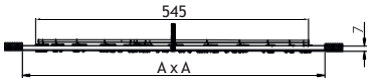
- Square plenum box, type **REV-B**
- Square insulated plenum box, type **REV-B ISO**
- Circular plenum box, type **RER-B**
- Insulated circular plenum box, type **RER-B ISO**
- Regulating valve for plenum box, type **CRC**

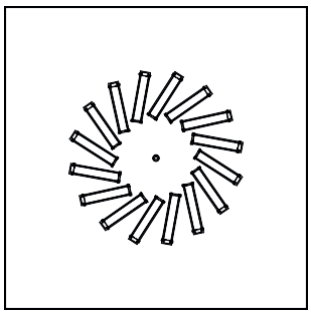
Order Example

- **VWR-3A, 600, 24 + REV-B 600 + CRC 250**

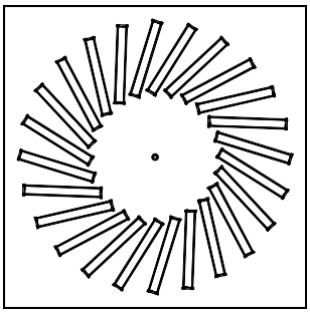
Explanation
VWR-3A = Diffuser type
600 = Plate size
24 = Slot quantity
Accessories
REV-B 600 = Plenum box for diffuser with 24 slots
CRC = Regulating valve for plenum box
250 = Plenum box connection diameter 250







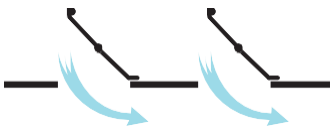
VWR-3A 600/16

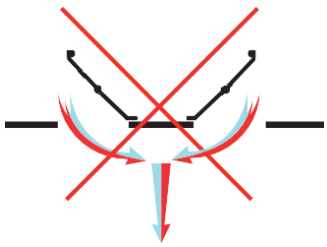


VWR-3A 600/24

	Dimensions	
VWR-3A	Slots	AxA [mm]
400/12	12	395 x 395
400/16	16	395 x 395
500/12	12	495 x 495
500/16	16	495 x 495
600/12	12	595 x 595
600/16	16	595 x 595
600/24	24	595 x 595

Flow patterns deflectors





Quick selection										
VWR-3A				16			24			
Q	Ak			0.01548			0.03718			
	B			1.2	1.8	2.7	1.2	1.8	2.7	
150		H=	2.7	0.09	0.12	0.08				
	Vz	H=	3.2	0.06	0.07	0.05				
		H=	3.8	0.04	0.05	0.04				
	Vk				2.7					
	X0,25				1.1					
	Ps				4					
	Lw(A)				<20					
200		H=	2.7	0.12	0.15	0.11	0.09	0.11	0.09	
	Vz	H=	3.2	0.08	0.1	0.07	0.06	0.07	0.05	
		H=	3.8	0.05	0.07	0.05	0.04	0.05	0.04	
	Vk				3.6			1.5		
	X0,25				1.5			0.9		
	Ps				8			2		
	Lw(A)				22			<20		
250		H=	2.7	0.15	0.19	0.13	0.11	0.14	0.11	
	Vz	H=	3.2	0.1		0.08	0.07		0.07	
		H=	3.8	0.07	0.08	0.06	0.05	0.06	0.05	
	Vk				4.5			1.9		
	X0,25				1.8			1.2		
	Ps				12			4		
	Lw(A)				29			<20		
300		H=	2.7	0.18	0.23	0.16	0.13	0.17	0.13	
	Vz	H=	3.2	0.12	0.15	0.1	0.08	0.1	0.08	
		H=	3.8	0.08	0.1	0.07	0.06	0.07	0.06	
	Vk				5.4			2.2		
	X0,25				2.2			1.4		
	Ps				18			5		
	Lw(A)				35			<20		
350		H=	2.7				0.16	0.19	0.15	
	Vz	H=	3.2				0.1	0.12	0.09	
		H=	3.8				0.07	0.08	0.07	
	Vk							2.6		
	X0,25							1.7		
	Ps							7		
	Lw(A)							<20		
400		H=	2.7				0.18	0.22	0.17	
	Vz	H=	3.2				0.11	0.14	0.11	
		H=	3.8				0.08	0.1	0.08	
	Vk							3		
	X0,25							1.9		
	Ps							9		
	Lw(A)							24		
500		H=	2.7				0.22	0.28	0.21	
	Vz	H=	3.2				0.14	0.17	0.14	
		H=	3.8				0.1	0.12	0.09	
	Vk							3.7		
	X0,25							2.4		
	Ps							14		
	Lw(A)							30		
600		H=	2.7				0.27	0.33	0.26	
	Vz	H=	3.2				0.17	0.21	0.16	
		H=	3.8				0.12	0.15	0.11	
	Vk							4.5		
	X0,25							2.8		
	Ps							20		
	Lw(A)							36		

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