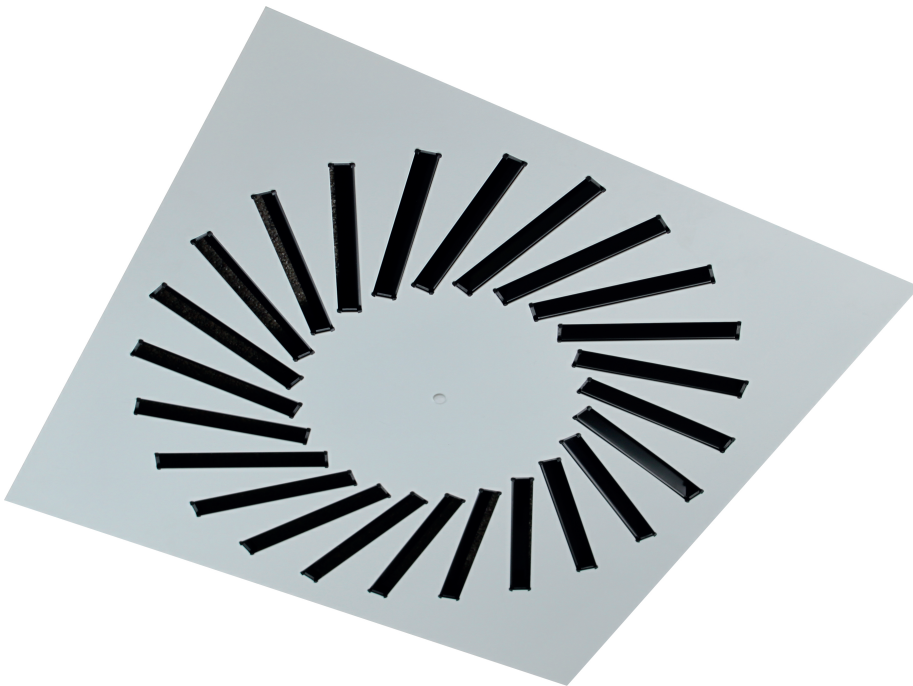


**VWR-3A
(RAL9016)**

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



Square adjustable swirl diffusers type VWR-3A (RAL9016)

Square swirl ceiling diffusers with adjustable blades

Brand

- Cairox

Application

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

Material

- Galvanised steel

Colour

- Standard colour white, RAL 9016 with black blades

Composition

- Square swirl ceiling diffuser made of galvanised 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 concealed 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**
- Polystyrene plenum box, type **PPS-P** with duct connection **PPS-APD** and mounting bar **PPS-MB**

(When using PPS-P plenum, a screw of at least 8cm must be provided by the installer)

himself)

Text for tender

- The air supply diffusers are of the swirl type with adjustable black deflector blades. They are made of galvanised steel with white powder coated RAL 9016.
- CAIROX type **VWR-3A+REV-B**

Order example

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

Explanation

VWR-3A = Diffuser type

600 = Plate size

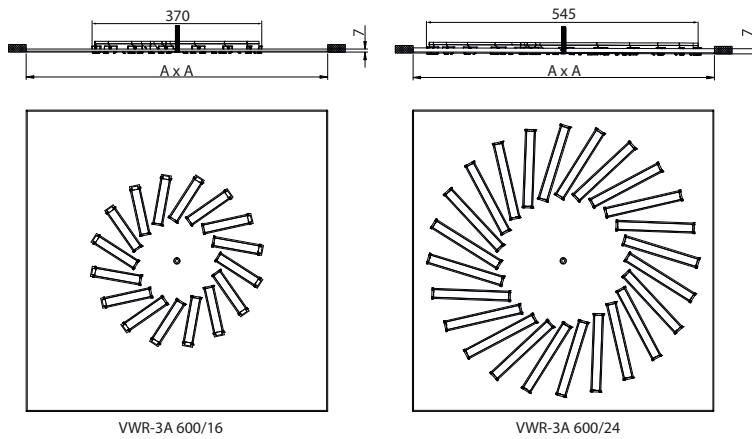
24 = Slot quantity

Accessories

REV-B 600 = Plenum box for diffuser with 24 slots

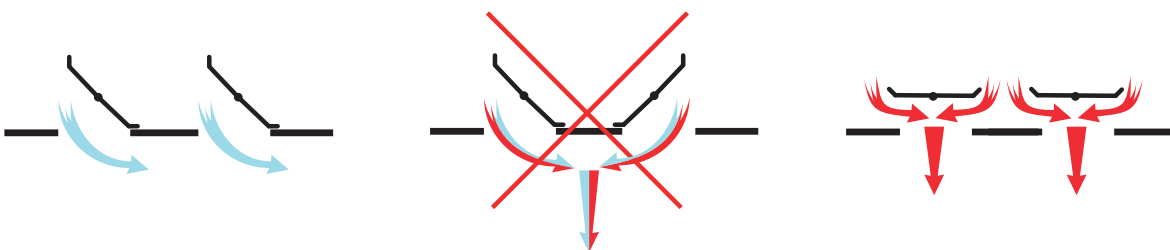
CRC = Regulating valve for plenum box

250 = Plenum box connection diameter 250



VWR-3A	Dimensions	
	Slots	AXA [mm]
400/16	16	395x395
500/16	16	495x495
600/16	16	595x595
600/24	24	595x595
625/24	24	623x623

Flow patterns deflectors

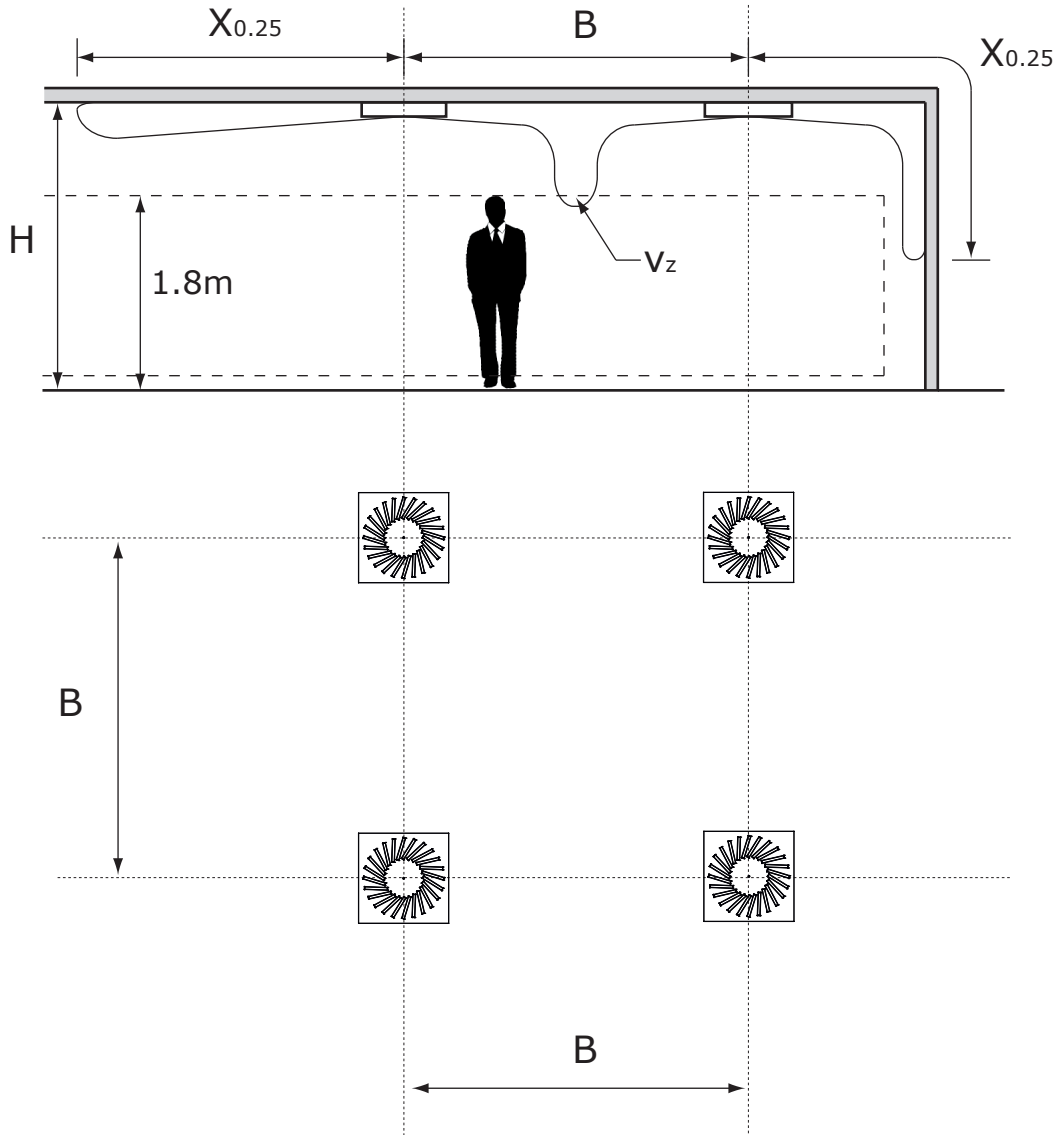


		Quick selection					
VWR-3A		16			24		
Q	Ak	0.01548			0.03718		
	B	1.2	1.8	2.7	1.2	1.8	2.7
150	Vz	H= 2.7	0.09	0.12	0.08		
		H= 3.2	0.06	0.07	0.05		
		H= 3.8	0.04	0.05	0.04		
	Vk	2.7					
	X0,25	1.1					
Ps	4						
Lw(A)	<20						
200	Vz	H= 2.7	0.12	0.15	0.11	0.09	0.11
		H= 3.2	0.08	0.1	0.07	0.06	0.07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

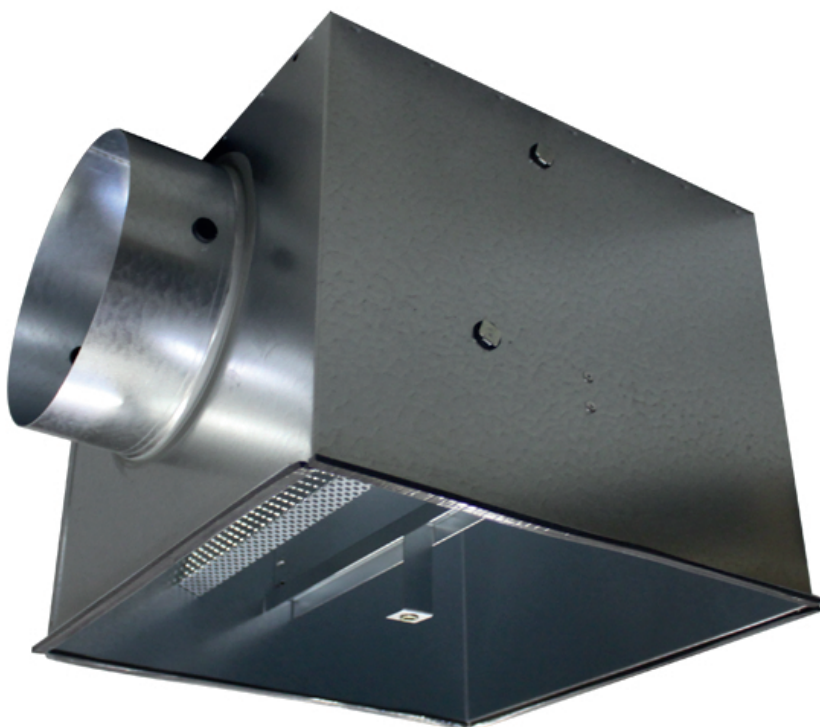
Symbols and specifications

- 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 or with fully opened damper.
 - 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



- Plenum boxes
- Square
- Steel



Square plenum boxes type REV-B

Universal plenum boxes with perforated plate in galvanized steel

Brand

- Cairox

Material

- Galvanized steel

Composition

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

Accessories

- Circular regulating valve, type **CRC**

Order example

- **REV-B 600 + CRC 250**

Explanation

REV-B = Plenum box type

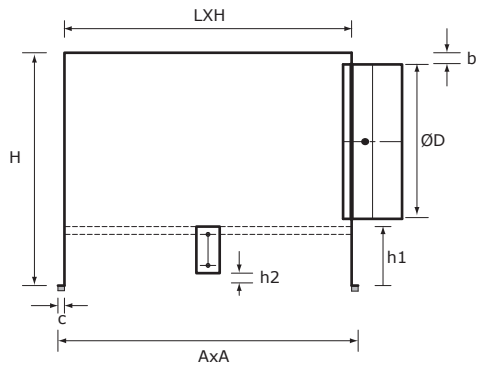
600 = Size type

Accessory

CRC 250 = Regulating valve for plenum box connection Ø250

Other available products

- Insulated plenumbox type **REV-B ISO**



Dimensions								
REV-B	L X H [mm]	A X A [mm]	ØD [mm]	H [mm]	b [mm]	c [mm]	h1 [mm]	h2 [mm]
300	270 X 270	288 X 288	160	250	15	9	65	10
400	370 X 370	388 X 388	200	300	15	9	65	10
500	470 X 470	488 X 488	200	300	15	9	65	10
600	570 X 570	588 X 588	250	350	15	9	65	10

- 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 valve control damper, type **CRC**

Order example

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

Explanation

RER-B = Plenum box type

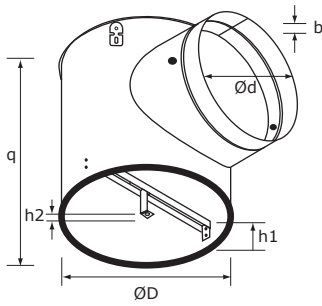
600 = Size type

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]	h_1 [mm]	h_2 [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