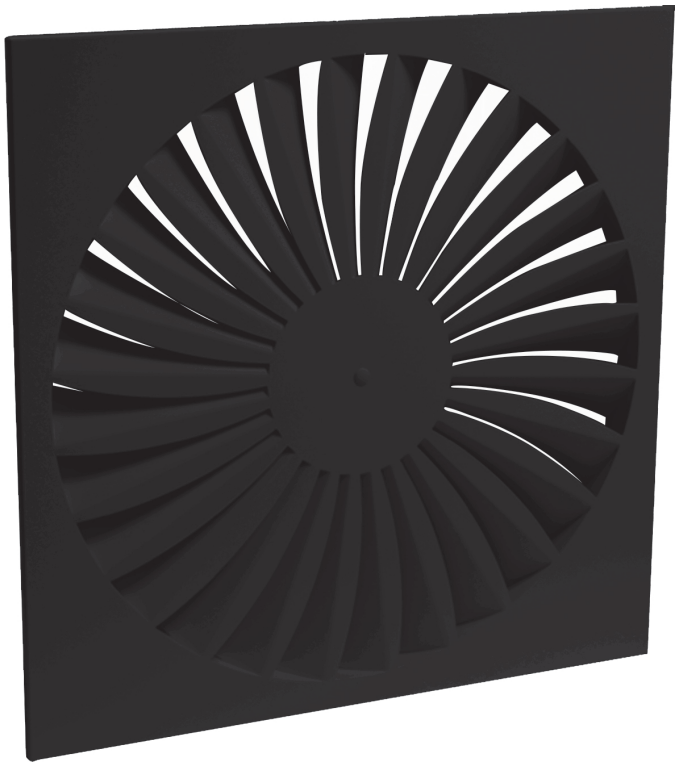
VWR-FCSA (RAL9005)

- Swirl diffusers
- Square
- Steel
- Black, RAL 9005



Black square swirl diffusers with fixed curved blades type VWR-FCSA (RAL9005)

Swirl ceiling diffusers with high induction rate, consisting of a square 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
- Colour black, RAL 9005
- 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**
- Square plenum box, type **REV-B**
- Insulated circular plenum box, type **RER-B ISO**
- Insulated square plenum box, type **REV-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**

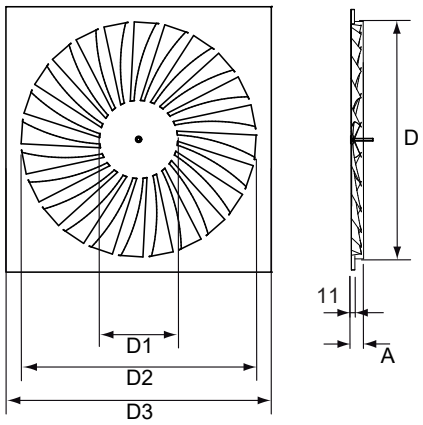
Text for tender

- The air supply ceiling diffusers are square with a circular arranged swirl with fixed curved blades. They are made of a steel powdercoated frontplate in black finish RAL 9005. The diffusers are standard delivered with galvanized steel plenumbox equipped with perforated plate and damper in the side entry spigot. The diffuser is centrally screw mounted.
- **Cairox** type **VWR-FCSA (RAL9005) + RER-A**

Order example

- **VWR-FCSA (RAL9005), 600 + RER-B 600 + CRC 250**

Explanation
VWR-FCSA (RAL9005) = Diffuser type
600 = Diffuser size/swirl size
Accessories
RER-B = Plenum box type
600 = Size plenum box
CRC = Plenum box connection valve
250 = Plenum box connection diameter 250



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

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

Quick selection																		
VWR-FCSA			300			400			500			600			625*			
	Ak		0.023			0.03			0.0465			0.07			0.07			
Q	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	
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	0.22	0.17	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	0.18	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	0.15	0.13	0.12	0.15	0.13	0.12	
	Vk			3.6			2.8			1.8			1.2			1.2		
	X0,25			3.7			3.2			1.9			1.2			1.2		
	Ps			67			19			5			2			2		
	Lw(A)			47			30			<20			<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	0.2	0.18	0.24	0.2	0.18	
		H= 3.8				0.38	0.33	0.29	0.27	0.24	0.21	0.2	0.18	0.16	0.2	0.18	0.16	
	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	0.46	
		H= 3.8										0.53	0.46	0.41	0.53	0.46	0.41	
	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 diffusers in m
- H = Installation height of the diffusers in m
- Vz = Maximum velocity at the occupied zone regarding distance between diffusers and installation height in m/s
- Vk = Average effective velocity through the grill in m/s
- X0.20 = Throw length in m at an endvelocity Vt of 0,20m/s
- Ps = Static pressure loss given in Pa
- Lw(A) = Acoustic power in dB(A)

- The throw X0.20 is given at an end velocity of 0.20m/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 deviding the X0.20 values with factor 1.1. For heating purposes at Dt of +11K a multiplier of 1.1 should be applied to the given X0.20 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 grilles without damper of with fully opened damper.

- The acoustic power Lw(A) are given for grilles 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