

Air through perfection

Circular ceiling diffuser

RCD-H



ACP
Ceiling diffusers

Circular ceiling diffuser RCD-H



Description

Circular diffuser for high ceiling with adjustable central cones.

The design of the product determines a high level of induction rate.

The ceiling diffuser can be used to introduce or evacuate air.

Installation height 2.7-6 m.

Technical specifications

Characteristics

The diffuser has adjustable cones.

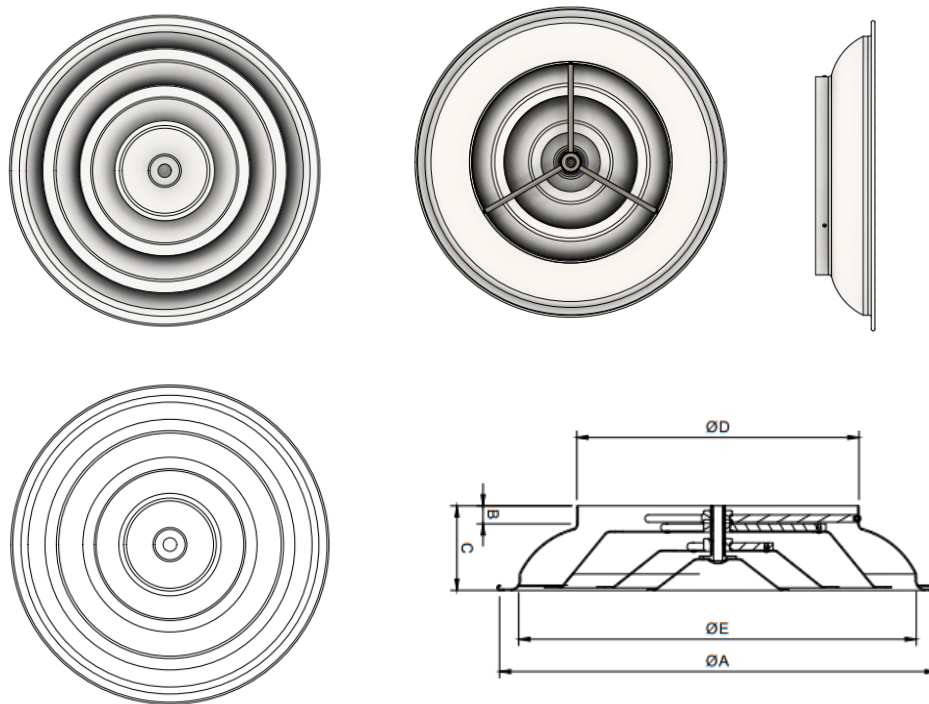
The ceiling diffuser is available in the following diameters: 100, 150, 160, 200, 250, 300, 315, 350, 400, 450, 500 and 630 mm.

Materials

The ceiling diffuser is made of aluminum and steel, electrostatic field painted in glossy white RAL 9016.

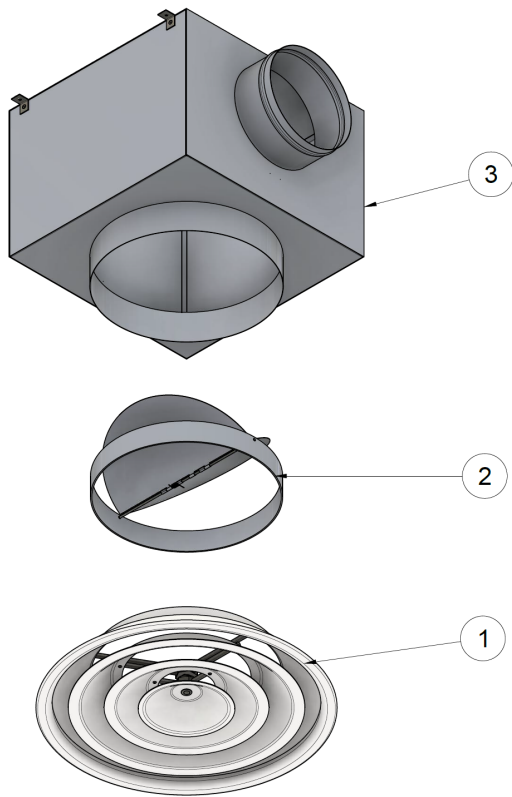
Other RAL colours are available on request.

Technical drawing



RCD-H	ØD [mm]	ØE [mm]	ØA [mm]	B [mm]	C [mm]
100	96	195	250	33	85
150	146	280	330	25	90
160	156	280	330	27	90
200	196	370	445	37	115
250	246	460	535	37	135
300	296	560	655	45	170
315	311	560	655	48	170
350	346	650	763	60	195
400	396	680	793	60	195
450	444	730	843	60	195
500	496	782	893	60	195
630	624	929	1045	55	210

Product specifications



- 1 - RCD-H Circular ceiling diffuser
- 2 - DAM-RCDH Control damper (optional)
- 3 - Plenum box (optional)

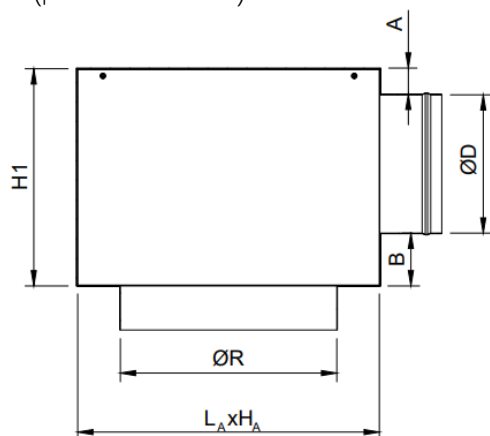
Accessories

RCD-H diffuser can be delivered with a connecting plenum to the circular duct, with a horizontal connection.

The plenum is provided with suspension elements (lugs) and bead roll on the spigot, for easy fixing of the flexible duct.

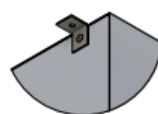
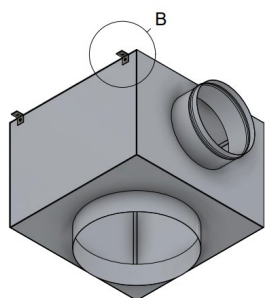
Optionally can be delivered with DAM-RCDH control damper .

Adapter (plenum box)



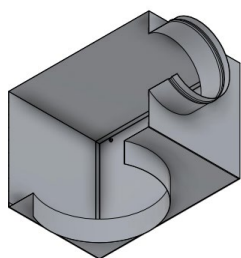
$L_A \times H_A$ – depending on $\varnothing R$
 $A, B, H1$ – depending on demand and $\varnothing D$
 $\varnothing R$ – connection diameter RCD-H + 4 mm

The adapter is made of galvanized steel sheet Z140 and is equipped with 4 lugs for suspension.

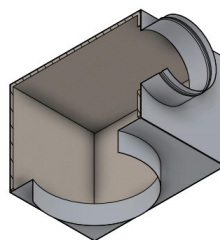


B - Suspension lug

On request, the plenum can be insulated with 6 mm thick elastomeric rubber.



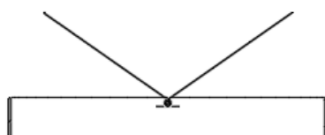
AN - Uninsulated adapter



AIZ - Insulated adapter

Control damper DAM-RCDH

DAM-RCDH can be used to adjust the air flow



Functional parameters

Air flow (m³/h)	Diameter	100	160	200	250	315	350	400	450	500	630
	Ak [m²]	0.0059	0.015	0.027	0.044	0.073	0.090	0.118	0.150	0.225	0.299
100	X [m]	1.0									
	NR [dB(A)]	35.0									
	Veff [m/s]	4.7									
	ΔPt [pa]	47.0									
150	X [m]	1.4									
	NR [dB(A)]	45.0									
	Veff [m/s]	7.1									
	ΔPt [pa]	94.0									
200	X [m]	1.9	1.4								
	NR [dB(A)]	58.0	25.0								
	Veff [m/s]	9.4	3.7								
	ΔPt [pa]	171.0	14.0								
250	X [m]		1.7	1.3							
	NR [dB(A)]		30.0	18.0							
	Veff [m/s]		4.6	2.6							
	ΔPt [pa]		20.5	6.8							
300	X [m]		2.1	1.5	1.3						
	NR [dB(A)]		36.0	23.0	15.0						
	Veff [m/s]		5.6	3.1	1.9						
	ΔPt [pa]		33.5	10.5	4.3						
400	X [m]		2.8	2.1	1.6	1.6					
	NR [dB(A)]		45.0	30.0	22.0	3.0					
	Veff [m/s]		7.4	4.1	2.5	1.5					
	ΔPt [pa]		55.0	17.5	7.7	4.2					
500	X [m]			2.6	2.1	1.9					
	NR [dB(A)]			36.0	27.0	20.0					
	Veff [m/s]			5.1	3.2	1.9					
	ΔPt [pa]			26.5	12.5	6.5					
600	X [m]			3.2	2.6	2.3	1.9				
	NR [dB(A)]			42.0	33.0	25.0	20.0				
	Veff [m/s]			6.2	3.8	2.3	1.9				
	ΔPt [pa]			38.0	17.0	10.0	5.5				
800	X [m]				3.5	3.5	2.6	2.3			
	NR [dB(A)]				41.0	34.0	25.0	20.0			
	Veff [m/s]				5.1	3.1	2.5	1.9			
	ΔPt [pa]				33.5	17.0	9.2	6.5			
1000	X [m]				4.5	3.8	3.4	3.0	2.7		
	NR [dB(A)]				50.0	40.0	34.0	28.0	22.0		
	Veff [m/s]				6.3	3.8	3.1	2.4	1.9		
	ΔPt [pa]				52.5	26.5	16.0	9.0	6.5		
1250	X [m]					4.6	4.1	3.8	3.3	3.1	
	NR [dB(A)]					47.0	42.0	35.0	26.0	24.0	
	Veff [m/s]					4.8	3.9	3.0	2.3	1.5	
	ΔPt [pa]					40.5	23.5	16.0	9.0	7.0	
1500	X [m]						5.2	4.5	4.0	3.6	
	NR [dB(A)]						47.0	41.0	35.0	29.0	
	Veff [m/s]						4.6	3.5	2.8	1.9	
	ΔPt [pa]						32.5	22.0	16.0	10.5	
1750	X [m]								4.8	4.2	3.5
	NR [dB(A)]								40.0	34.0	25.0
	Veff [m/s]								3.2	2.2	1.6
	ΔPt [pa]								20.0	14.5	7.0
2000	X [m]									4.8	4.1
	NR [dB(A)]									38.0	30.0
	Veff [m/s]									2.5	1.9
	ΔPt [pa]									19.5	8.5
2500	X [m]									5.8	5.1
	NR [dB(A)]									45.0	37.0
	Veff [m/s]									3.1	2.3
	ΔPt [pa]									29.5	14.5

The legend

Ak [m²] - The free surface

X [m] - The length of the air jet at a speed of 0.25 m/s

Veff [m/s] - The effective air velocity

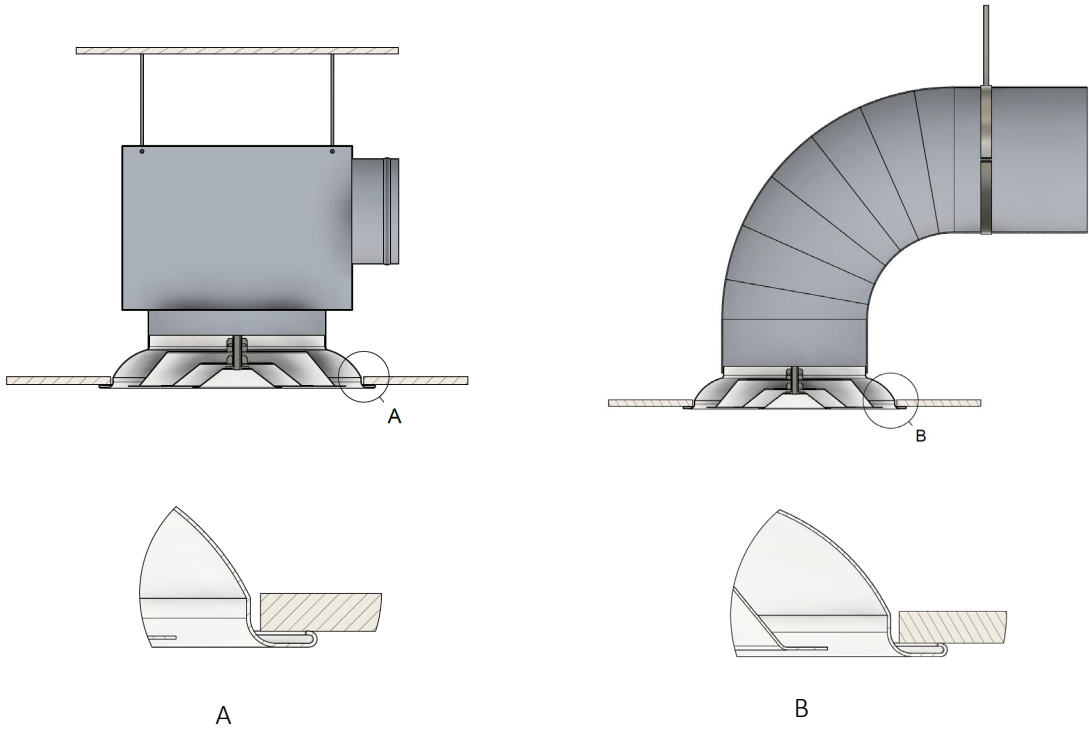
NR [dB (A)] - Noise level without room attenuation

ΔPt [Pa] - Pressure loss

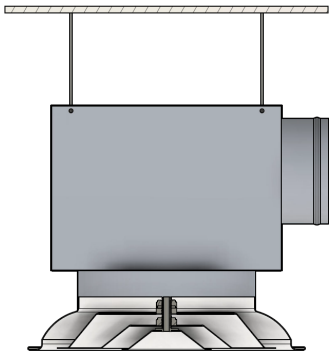
Installation

The diffuser can be installed suspended or in continuous ceiling. The fixing is done with screws in the diffuser connection.

Installation in continuous ceiling



Suspended in the ceiling



Order code

Example on how to place an order

Type	Dimensions	Accessories	Finish
RCD-H			
according to the table (D100÷D630)			
AIZ - Insulated adapter			
AN - Uninsulated adapter			
DAM-RCDH - Control damper			
RAL9016			
RAL.. - Other RAL colors on request			