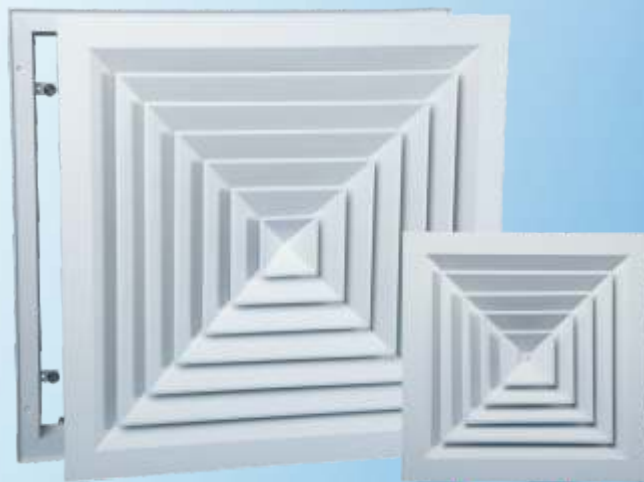


Square, diffusers **MSD** type



circular, **RNCD** type



Square diffusers

MSD

Applications:

Square diffusers are ceiling diffusers with air deflection on four sides.

Description:

A standard diffuser is made of two separate, detachable elements: the frame and the central diffuser. The latter may comprise a varying number of intermediate square, concentric frames, it may have egg-crate perforations (with lateral and vertical deflection - for deflection at large heights) or hybrid, a combination of the two. The central diffuser deflects air uniformly, on all four sides, deflection angles providing air diffusion at height with large jet lengths.

On request, the diffuser may be provided with magnetic support elements, on an additional counter-frame that shall remain fastened to the false ceiling.

For improved adjustment of the air flowrate, the use of OBD dampers is recommended.

Material:

- Outer frame: special profile, made of extruded aluminum, in RITECH design;
- Intermediate frames of the central diffuser: made of pressed aluminum sheet.

Finish:

Electrostatically painted surface, dried in polymerization oven, providing increased lifetime of the paint layer and its pigment. Standard color: WHITE - RAL code 9016. On request, products may be delivered in any RAL color.

Fastening:

Depending on specific installation conditions, fastening is provided through the inside, with proper anchor screws, on lateral side of the frame or fastening it to the plenum box.

Another fastening method involves anchor elements fixing the diffuser frame to the plenum box, with adjustable height.

Packaging:

Individual packaging, in polyethylene foil and delivered in cardboard boxes. Corners are protected with cardboard guards.

Technical specifications text-box, for price quotation requests:

Square diffuser, made of aluminum, with four-sides air deflection;

Color: RAL #####;

Outer sizes: mm X mm;

Accessories: Fixed counter-frame for magnetic support; OBD damper; insulated / non-insulated plenum box;

Type: RITECH MSD#####.



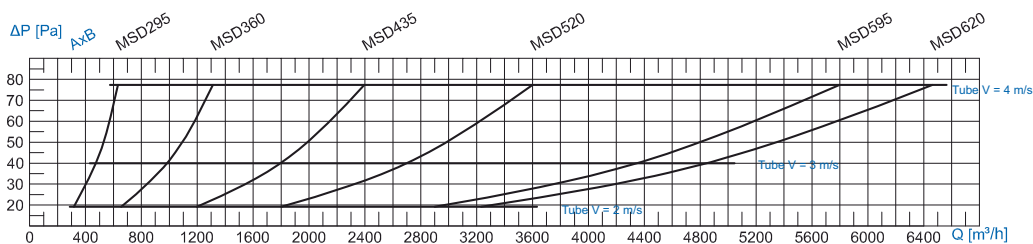
Performance table

Product code	A	B	Con- nection area	Free area	Tube V = 2 [m/s]			Tube V = 3 [m/s]			Tube V = 4 [m/s]		
	[mm]	[mm]	[m ²]	[m ²]	Q [m ³ /h]	ΔP [Pa]	Diff. V [m/s]	Q [m ³ /h]	ΔP [Pa]	Diff. V [m/s]	Q [m ³ /h]	ΔP [Pa]	Diff. V [m/s]
MSD 295	295	150	0,023	0,021	316	19,13	4,16	475	40	6,25	633	77,3	8,33
MSD 360	360	215	0,046	0,043	656	19,13	4,32	984	40	6,48	1.312	77,3	8,64
MSD 435	435	290	0,084	0,073	1.198	19,13	4,61	1.796	40	6,91	2.395	77,3	9,22
MSD 520	520	375	0,141	0,110	1.800	19,13	4,78	2.700	40	7,16	3.600	77,3	9,55
MSD 595	595	450	0,203	0,147	2.899	19,13	5,51	4.349	40	8,26	5.799	77,3	11,02
MSD 620	620	475	0,226	0,163	3.232	19,13	5,55	4.874	40	8,33	6.463	77,3	11,11

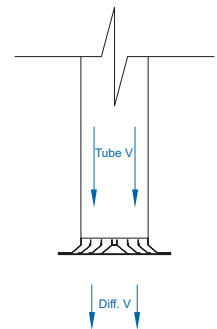
Legend:

Symbol	Description	M.U.
MSD	Square diffuser, with air deflection on four sides	
A	Outer size of diffuser	[mm]
B	Inner size of diffuser	[mm]
Connection area	Diffuser connection area (B x B)	[m ²]
Free area	Air passage area in diffuser section (connection area - blade area)	[m ²]
Q	Air flowrate	[m ³ /h]
ΔP	Pressure loss in diffuser	[Pa]
Diff. V	Air velocity through diffuser, calculated based on Flow and Free Area	[m/s]
Tube V	Air velocity in connection section	[m/s]

Pressure loss chart



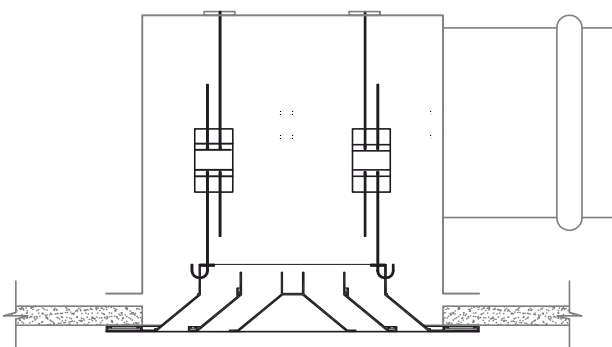
Ex: MSD360x360 Tube V = 3 m/s =>
Q=984mc/h & ΔP=40Pa



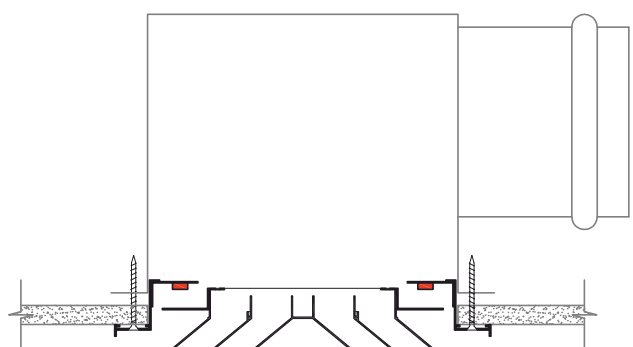
MSD - Square diffusers

Fastening

Anchoring with adjustable support elements



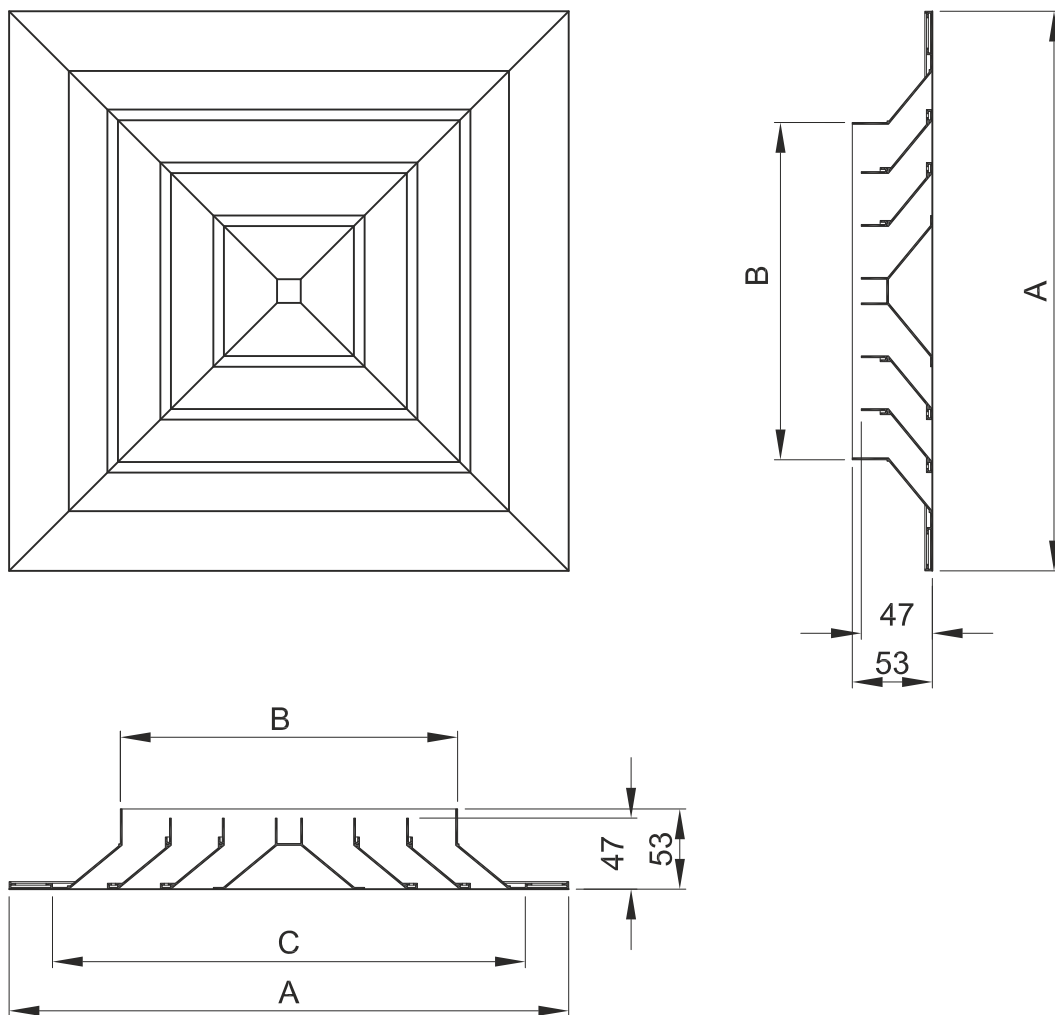
Installation with magnetic fastening to a fixed counter-frame



Design your environment



Sizes



Engineering tolerance $\pm 2\text{mm}$

Example: Code MSD360 represents:

Square diffuser with A = 360 mm

Accessories: Plenum box: MAD032032

OBD360 damper

Counter-frame for magnetic fastening

NOTE: Products may be ordered in customized sizes and configurations (colors, number and position of holes, fastening method, execution of hybrid product, special plenum box etc.)

Product code	A[mm]	B[mm]	C[mm]
MSD 295	295	150	245
MSD 360	360	215	310
MSD 435	435	290	385
MSD 520	520	375	470
MSD 595	595	450	545
MSD 620	620	475	570



Design your environment

Circular diffusers RNCD

Applications:

Circular diffusers are ceiling diffusers with air deflection through concentric deflectors.

Description:

Circular diffuser RNCD is made of two separate, detachable elements: the frame and the central diffuser. The latter may comprise a varying number of circular, concentric deflection elements. It is designed for low and medium pressure. The central diffuser deflects air uniformly, deflection angles providing air diffusion at height with large jet lengths. In the same time, thanks to a butterfly damper, the diffuser provides the option to adjust the deflected air flow.

Material:

The RNCD diffuser is made of pressed aluminum sheet.

Finish:

Electrostatically painted surface, dried in polymerization oven, providing increased lifetime of the paint layer and its pigment. Standard color: WHITE - RAL code 9016. On request, products may be delivered in any RAL color.

Fastening:

Depending on specific installation conditions, fastening is provided with proper anchor screws, through the inside, on lateral side of the frame or fastening it to the plenum box.

Packaging:

Individual packaging, in polyethylene foil and delivered in cardboard boxes.

Technical specifications text-box, for price quotation requests:

Circular diffuser, made of aluminum, with deflection through concentric deflectors;

Color: RAL ####;

Connection sizes: Ø..... mm;

Accessories: Plenum box RM-NCD Ø..... mm;

Type: RITECH RNCD - ###.



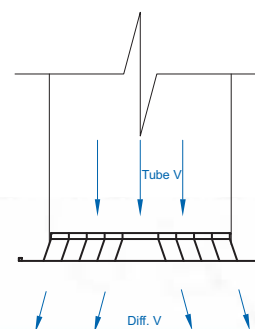
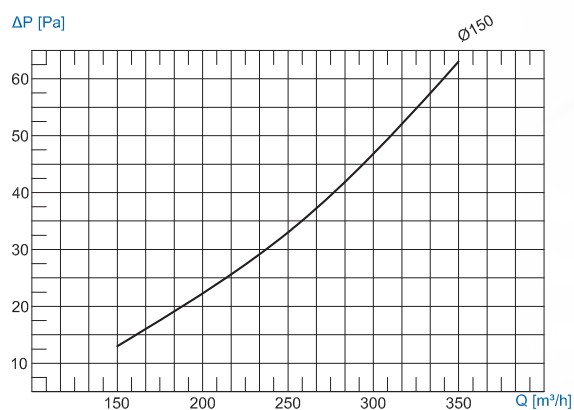
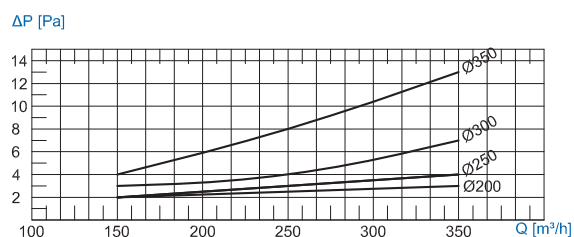
Performance table

Q [m³/h]	Parameters Ø A [mm]	Ø 150	Ø 200	Ø 250	Ø 300	Ø 350
150	V[m/s]	2,75	1,20	0,77	0,54	0,40
	Δp [Pa]	13	4	3	2	2
	Nz[dB(A)]	<15	<15	<15	<15	<15
200	V[m/s]	5,50	2,39	1,55	1,08	0,81
	Δp [Pa]	22	6	3	3	2
	Nz[dB(A)]	<15	<15	<15	<15	<15
250	V[m/s]	6,87	2,99	1,94	1,35	1,01
	Δp [Pa]	33	8	4	3	3
	Nz [dB(A)]	32	18	<15	<15	<15
300	V[m/s]	8,25	3,59	2,32	1,61	1,21
	Δp [Pa]	47	10	5	4	3
	Nz [dB(A)]	37	24	<15	<15	<15
350	V[m/s]	9,62	4,18	2,71	1,88	1,41
	Δp [Pa]	63	13	7	4	3
	Nz [dB(A)]	41	28	18	<15	<15

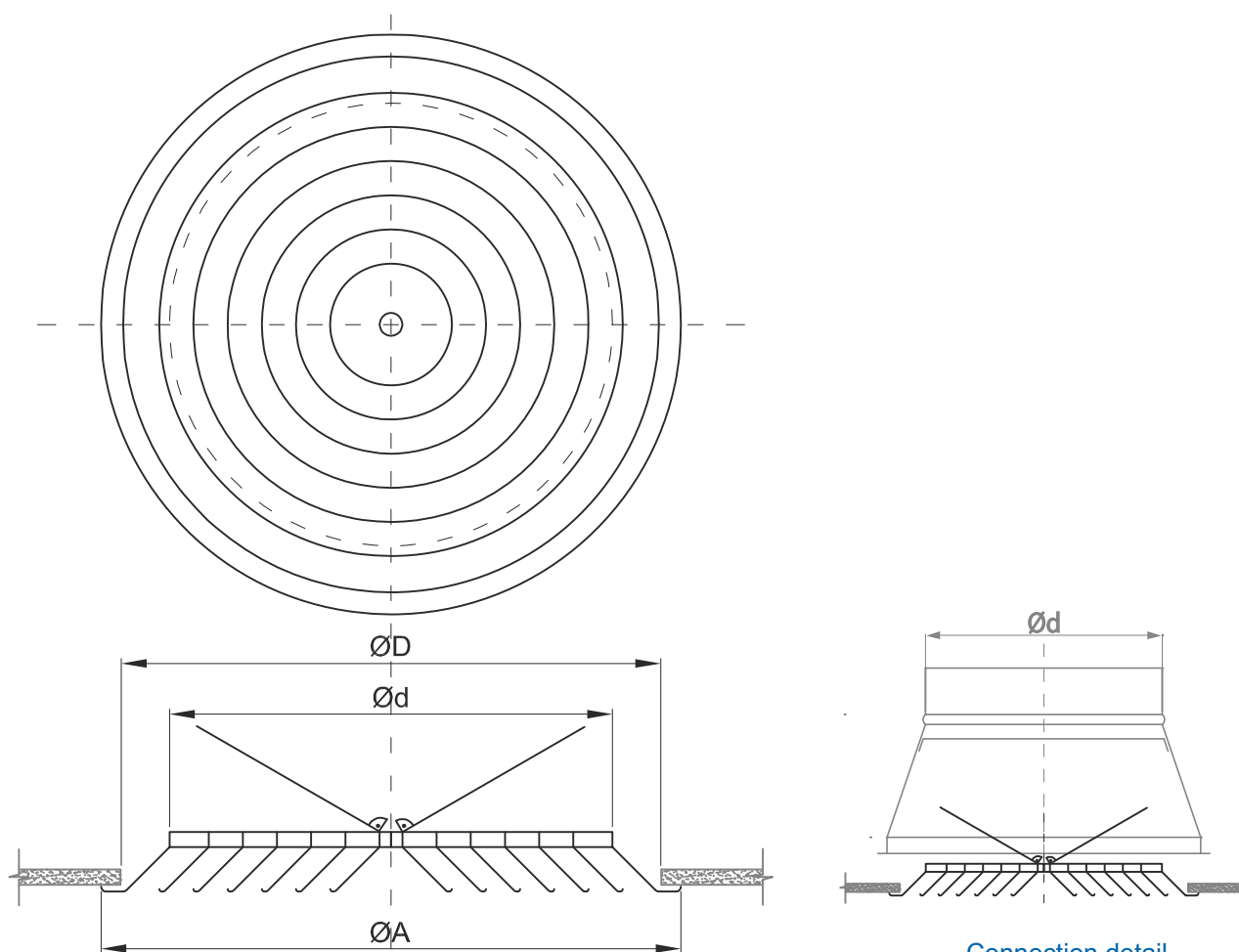
Legend:

Symbol	Description	M.U.
RNCD	Circular diffuser, made of aluminum, with circular concentric deflectors	
Ø A	Outer size of diffuser	[mm]
Q	Air flowrate	[m³/h]
ΔP	Pressure loss in diffuser	[Pa]
V	Air velocity through diffuser	[m/s]
Nz	Noise level (sound pressure)	[dB(A)]

Pressure loss chart



Sizes



Engineering tolerance $\pm 2\text{mm}$

Connection detail

Example: Code RNCD 350 represents:
Circular diffuser with inner size Ø350 mm
 Accessories: Plenum box RM - NCD

Product code	Ø A [mm]	Ø d [mm]	Ø D [mm]
RNCD 150	257	149	225
RNCD 200	307	199	275
RNCD 250	357	249	325
RNCD 300	407	299	375
RNCD 350	457	349	425



Design your environment