



DESCRIPTION:

BD-S: Circular ceiling diffuser with fixed core

BD-A: Circular ceiling diffuser with removable core.

MATERIAL:

- Standard Production : Metal frame and core
- Optional Production : Aluminum frame and core

APPLICATION:

BD series circular ceiling diffuser used for the supply of cooled and heated air in facilities like offices, shopping rent etc...BD can used for ceiling installation

FINISHING:

- Powder coated in RAL 9010 colour as standard
- Other colours on request

INSTALLATION:

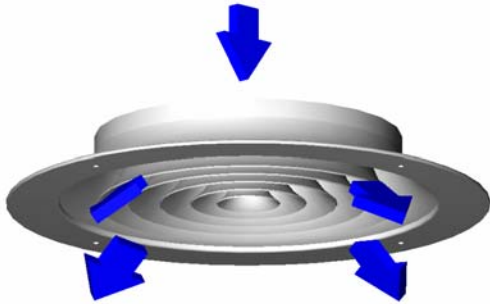
- Screw {Standard}
- Bridge
- No fixing

ACCESSORIES:

- If desired, it is possible to add a damper to adjust the amount of air to be collected.
KD: Butterfly Damper
HKD: Hit and Miss Damper
- PK: Plenum Box
- KS: Mounting Frame



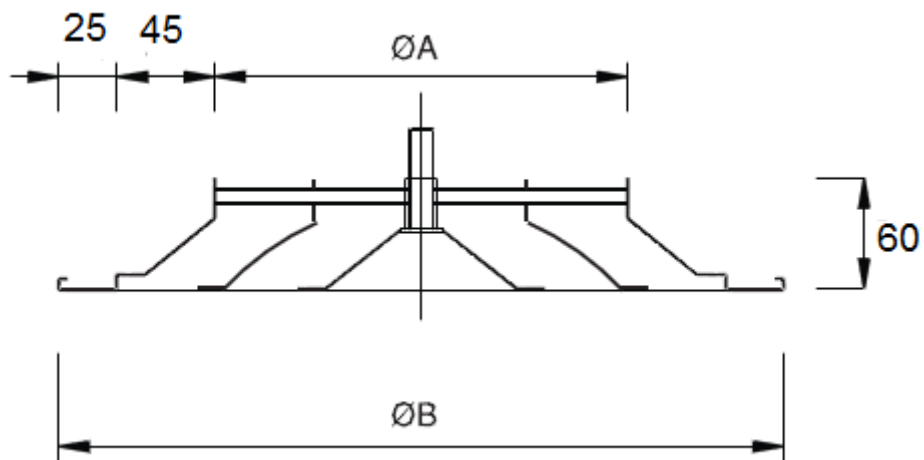
STANDARD SIZES (mm):



Dimensions	150	200	250	300	350	400	450	500	550
ØA	150	200	250	300	350	400	450	500	550
ØB	290	340	390	440	490	540	590	640	690

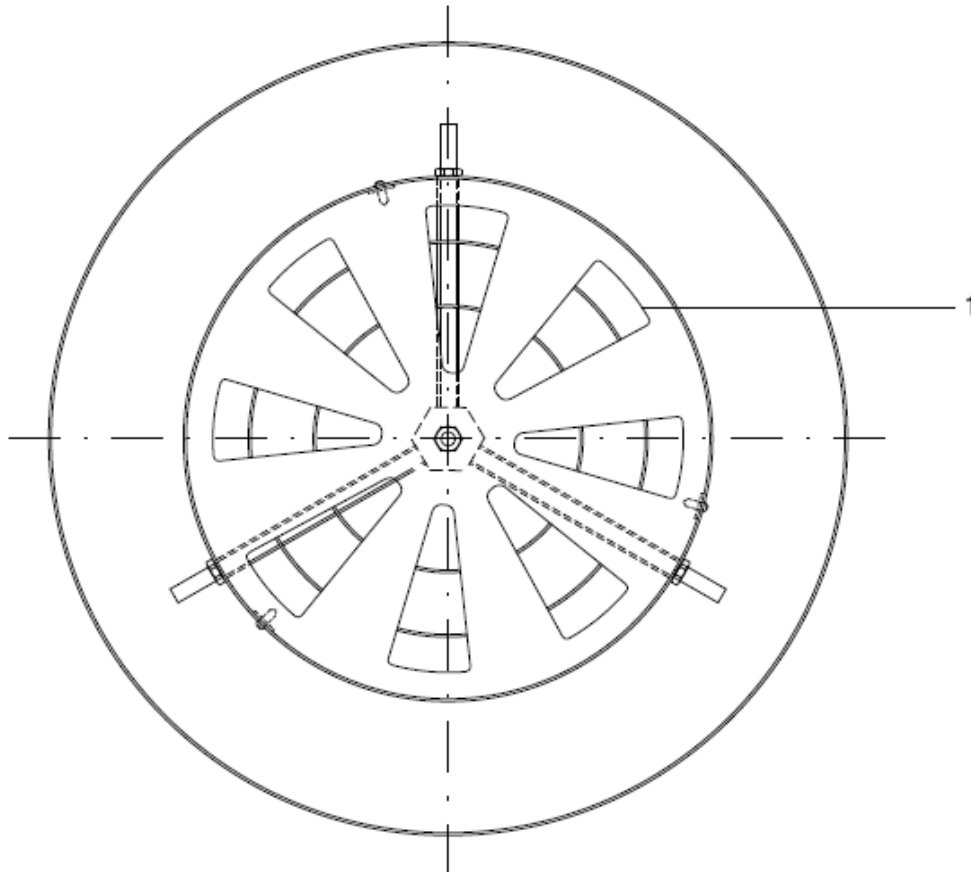
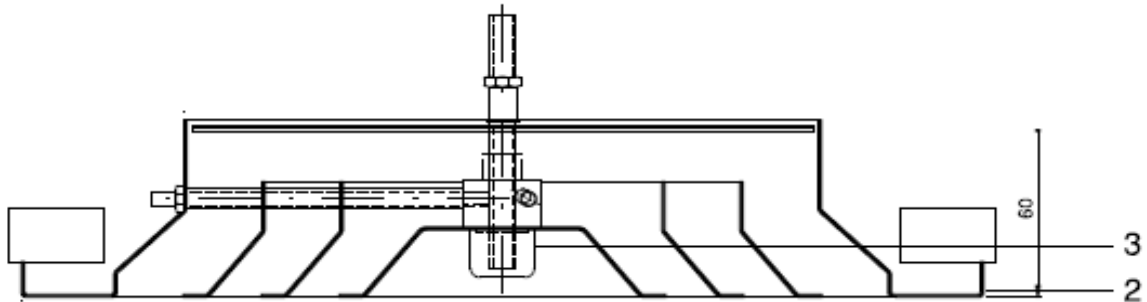
* Any combination of these sizes

TECHNICAL DRAWINGS:





CIRCULAR CEILING DIFFUSERS WITH STAGGERED DAMPER



- 1 - Hit and Miss Damper
- 2 - Circular Ceiling Diffuser
- 3 - Damper Lever



EFFECTIVE AREA Ak(m²)

SELECTION TABLE

Standard sizes ø A (mm)	ø B	Efective area (m ²)	Air volume(m ³ /h)	Throw max.(m)
150	290	0,015	135	
200	340	0,027	243	1,3
250	390	0,040	360	1,55
300	440	0,056	504	1,8
350	490	0,074	666	2,2
400	540	0,090	810	2,4
450	590	0,112	1048	2,7
500	640	0,135	1215	2,9
550	690	0,192	1728	3,6

Datas was chosen when the air velocity is 2,5 m/s and the velocity at throw distance is 0,25m/s.

Table-1

QUICK SELECTION TABLE

Neck Diameter ØDmm	Effective Area m ²	AIR VELOCITY m/s									
		1,5	2,0	2,5	3,0	4,0	5,0	6,0	7,0	8,0	
150	0,015	81	108	135	162	216	270	324	378	432	
200	0,027	146	194	243	292	389	486	583	680	778	
250	0,040	216	288	360	432	576	720	864	1008	1152	
300	0,056	302	403	504	605	806	1008	1210	1411	1613	
350	0,074	400	533	666	799	1066	1332	1598	1865	2131	
400	0,090	486	648	810	972	1296	1620	1944	2268	2592	
450	0,112	605	806	1008	1210	1613	2016	2419	2822	3226	
500	0,135	729	972	1215	1458	1944	2430	2916	3402	3888	
550	0,192	1037	1382	1728	2074	2765	3456	4147	4838	5530	

Not: Flow Rate m³/h

Table-2



SELECTION TABLE FOR CIRCULAR CEILING DIFFUSER

SIZE	AREA m ²		AIR VOLUME (m ³ /h)													
			200	300	400	500	600	700	800	900	1000	1400	2000	2500	3000	
150	0,015	Vk (m/s)	3,7	5,8	7,8	-	-	-	-	-	-	-	-	-	-	
		Pt (Pa)	15	36	63	-	-	-	-	-	-	-	-	-	-	
		Lt (m)	0,7	1,15	1,4	-	-	-	-	-	-	-	-	-	-	
		NR	25	38	48	-	-	-	-	-	-	-	-	-	-	
200	0,027	Vk (m/s)	2,1	3,2	4,2	5,2	6,1	7,3	-	-	-	-	-	-	-	
		Pt (Pa)	4,7	10	19	29	40	56	-	-	-	-	-	-	-	
		Lt (m)	-	0,8	1,15	1,35	1,7	1,9	-	-	-	-	-	-	-	
		NR	-	22	31	38	45	52	-	-	-	-	-	-	-	
250	0,040	Vk (m/s)	-	2,2	2,8	3,5	4,2	4,9	5,6	6,2	7,2	-	-	-	-	
		Pt (Pa)	-	5,1	7,9	13	19	26	25	43	53	-	-	-	-	
		Lt (m)	-	0,65	0,85	1,15	1,4	1,6	1,8	2,1	2,4	-	-	-	-	
		NR	-	-	21	27	33	38	44	47	50	-	-	-	-	
300	0,056	Vk (m/s)	-	-	2,0	2,5	3,0	3,5	4,0	4,5	5,0	7,0	-	-	-	
		Pt (Pa)	-	-	4,2	6,5	9	13	17	22	26	51	-	-	-	
		Lt (m)	-	-	0,72	0,92	1,1	1,35	1,5	1,7	1,8	2,7	-	-	-	
		NR	-	-	-	-	24	29	34	37	42	-	-	-	-	
350	0,074	Vk (m/s)	-	-	-	-	2,2	2,6	3,0	3,4	3,7	5,2	-	-	-	
		Pt (Pa)	-	-	-	-	5,1	7,3	9	12	15	29	7,5	-	-	
		Lt (m)	-	-	-	-	0,94	0,92	1,35	1,45	1,6	2,4	5,9	-	-	
		NR	-	-	-	-	-	-	26	30	37	45	3,5	-	-	
400	0,090	Vk (m/s)	-	-	-	-	-	2,2	2,4	2,8	3,1	4,3	5,0	6,2	-	
		Pt (Pa)	-	-	-	-	-	5,1	6,1	7,9	9,5	21	26	43	-	
		Lt (m)	-	-	-	-	-	1,0	1,2	1,35	1,4	2,2	2,7	3,5	-	
		NR	-	-	-	-	-	-	21	24	28	38	45	51	-	
450	0,112	Vk (m/s)	-	-	-	-	-	-	-	-	2,3	2,4	3,5	5,0	6,0	7,5
		Pt (Pa)	-	-	-	-	-	-	-	-	5,4	6,1	13	26	38	59
		Lt (m)	-	-	-	-	-	-	-	-	1,2	1,3	1,8	2,8	3,4	4,2
		NR	-	-	-	-	-	-	-	-	-	22	32	47	52	-
500	0,135	Vk (m/s)	-	-	-	-	-	-	-	-	-	2,1	2,8	4,1	5,0	6,0
		Pt (Pa)	-	-	-	-	-	-	-	-	-	4,7	7,9	18	26	38
		Lt (m)	-	-	-	-	-	-	-	-	-	1,2	1,8	2,4	3,0	3,8
		NR	-	-	-	-	-	-	-	-	-	-	27	38	46	52
550	0,192	Vk (m/s)	-	-	-	-	-	-	-	-	-	-	2,0	2,8	3,7	4,5
		Pt (Pa)	-	-	-	-	-	-	-	-	-	-	4,2	7,9	14	22
		Lt (m)	-	-	-	-	-	-	-	-	-	-	1,4	2,1	1,6	3,1
		NR	-	-	-	-	-	-	-	-	-	-	-	29	36	43

Table-3

SELECTION CRITERIAS

Ceiling Height H(m)=3±05

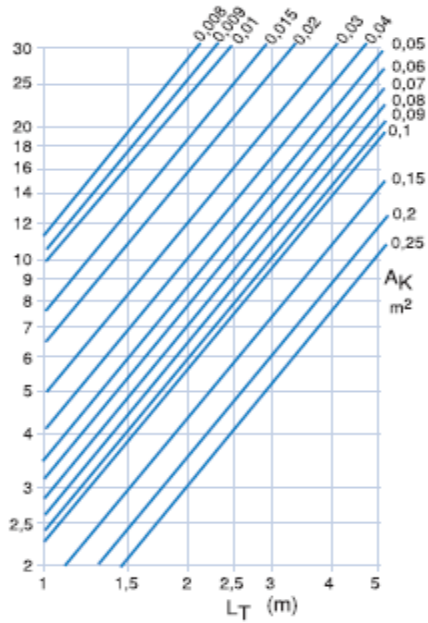
With ceiling effect

Damper %100 open

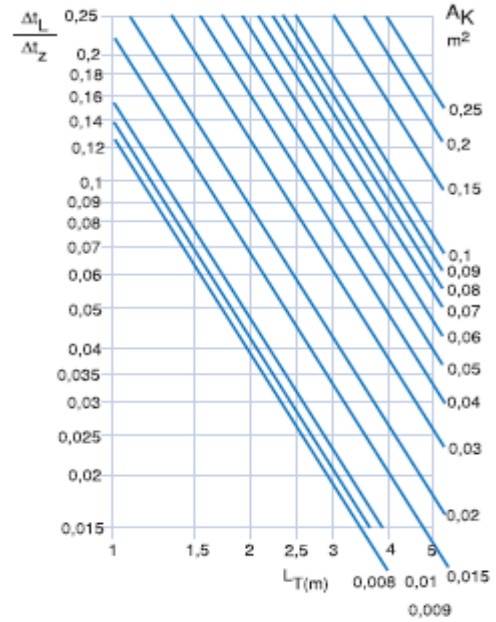


TEMPERATURE VARIABLES

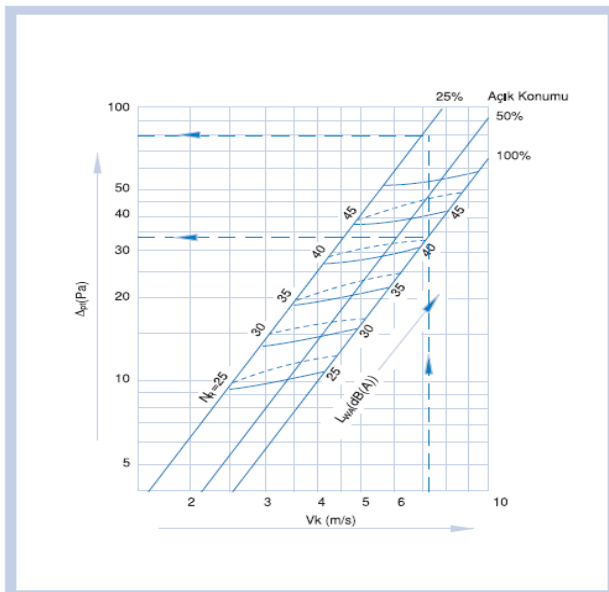
INDUCTION SELECTION DIAGRAM



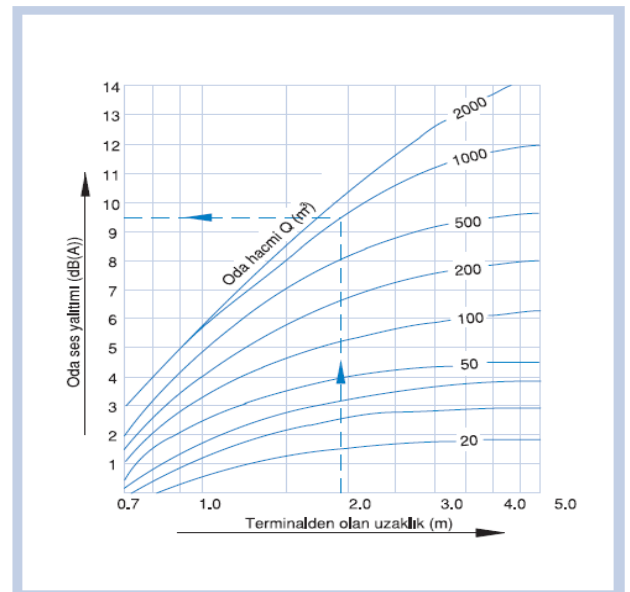
TEMPERATURE VARIABLE SELECTION



SOUND LEVEL AND PRESSURE LOSS DIAGRAM (BUTTERFLY DAMPER)



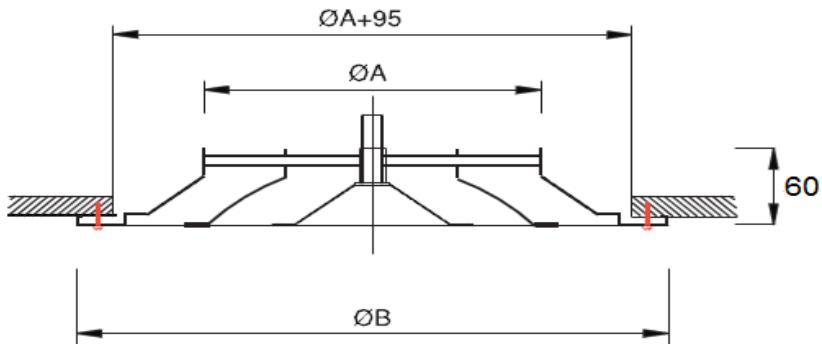
ROOM VOICE DELIVERY DIAGRAM





MOUNTING DETAILS

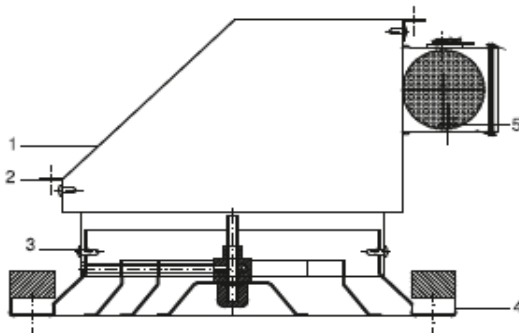
1- Screw Mounting Details



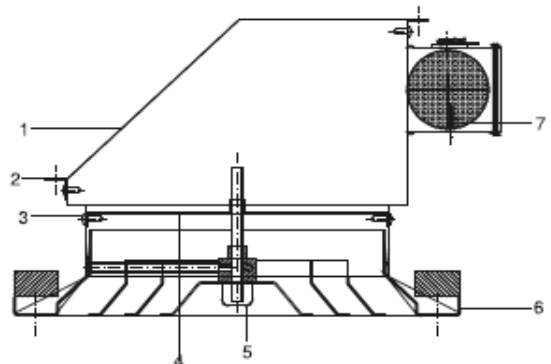
PLENUM BOX STANDARD MOUNTING



YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD SCREW MOUNTING (without insulation)

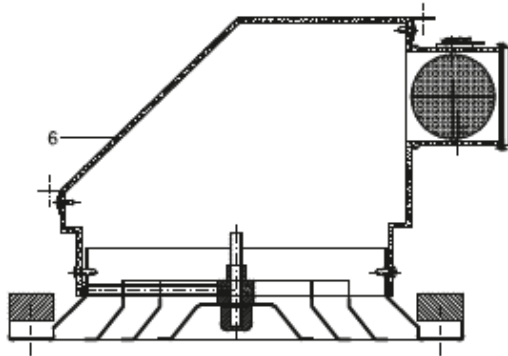


YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD BRIDGE MOUNTING (without insulation)



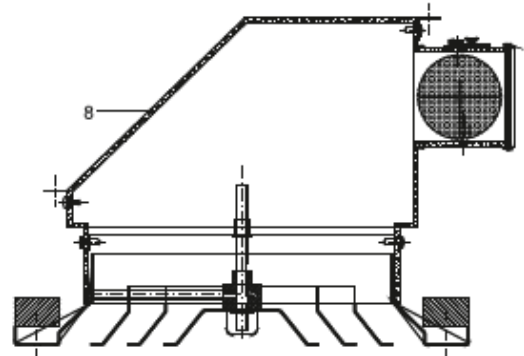


**YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD SCREW MOUNTING (with instulation)**



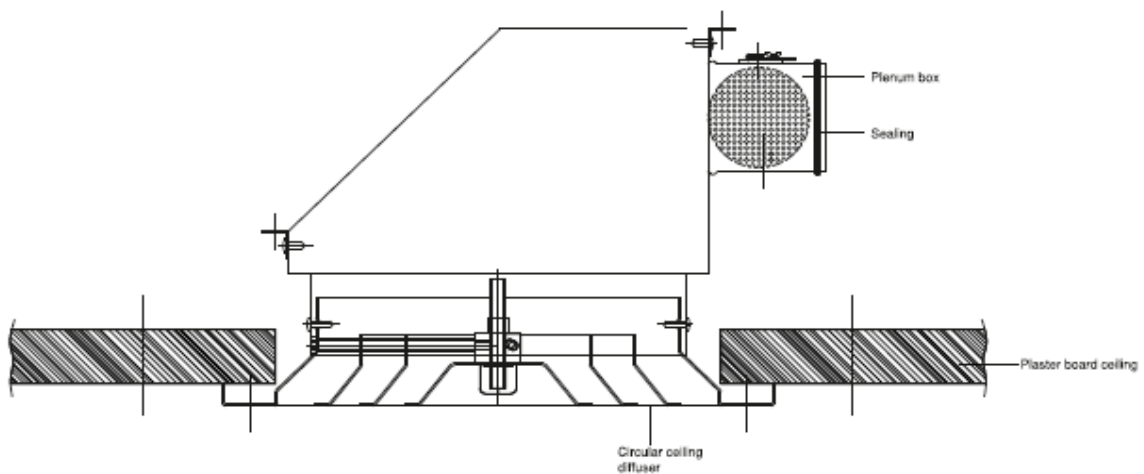
- 1-Plenum box
- 2-L Profile
- 3-Screw
- 4-Circular ceiling diffuser
- 5-Air control damper
- 6-Instulation

**YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD BRIDGE MOUNTING (with instulation)**



- 1-Plenum box
- 2-L Profile
- 3-Screw
- 4-Plenum box
- 5-Circular diffuser
- 6-Circular ceiling diffuser
- 7-Air control damper
- 8-Instulation

SPECIAL CEILING INSTALLATION DETAILS





ORDER CODES:

BD	S	M	xx	RAL9010	VD	W Ø300
S : Fixed core A : Removable core						W: Neck Size C: Frame Size
Metal frame and core : M Aluminum frame and core : A						XX: without Mounting VD: Screw Mounting KP: Bridge Mounting KS: Mounting Frame
XX: WITHOUT DAMPER KD: BUTTERFLY DAMPER CD: HIT AND MISS DAMPER						00: without coating EL: Anodic Aluminium RAL----: Powder Coated RAL