



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 be used for ceiling installation

FINISHING:

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

INSTALLATION:

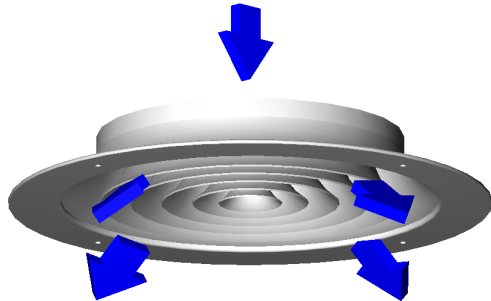
- Screw {Standard}
- Bridge
- No fixing

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



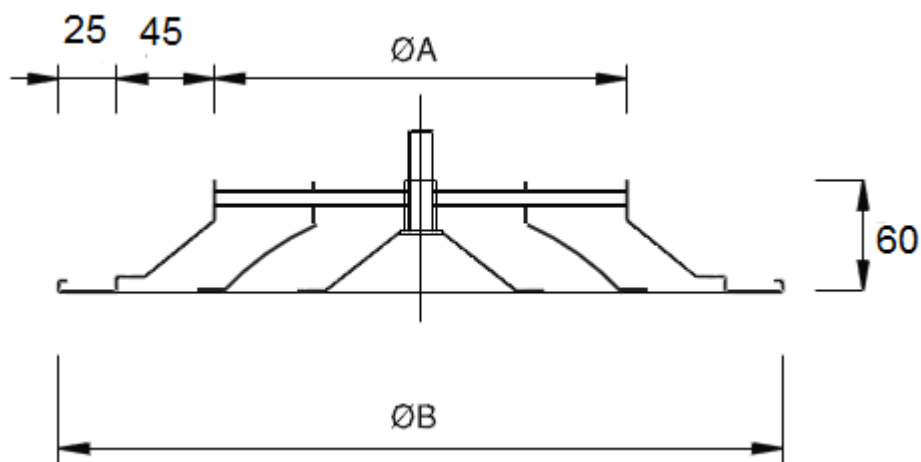
STANDARD SIZES (mm):



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

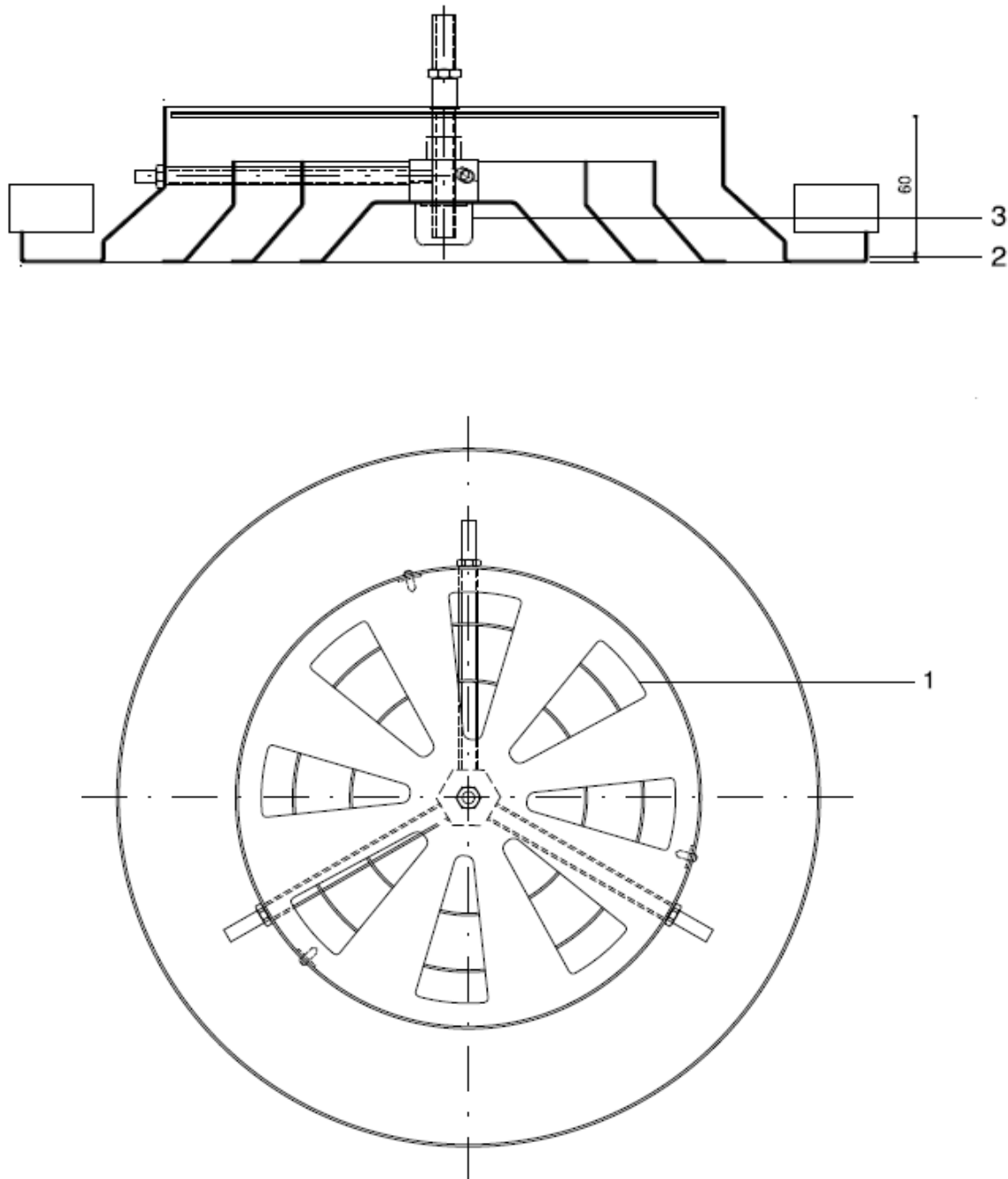
* Any combination of these sizes

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	Effective 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	35	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	59	-	-
		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	2,4	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

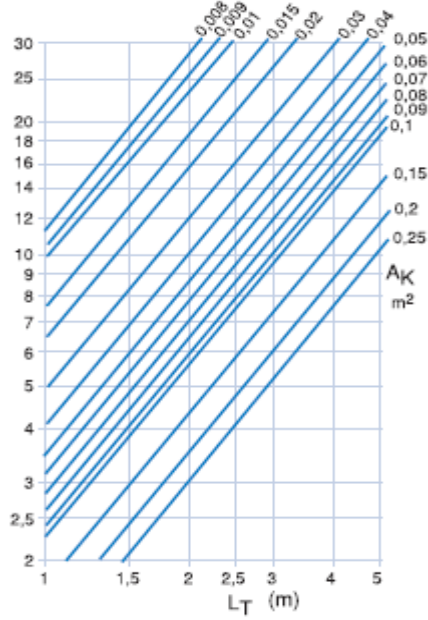
With ceiling effect

Damper %100 open

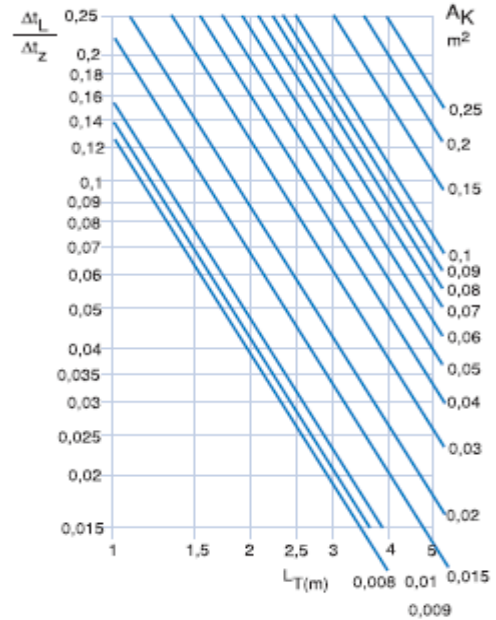


TEMPERATURE VARIABLES

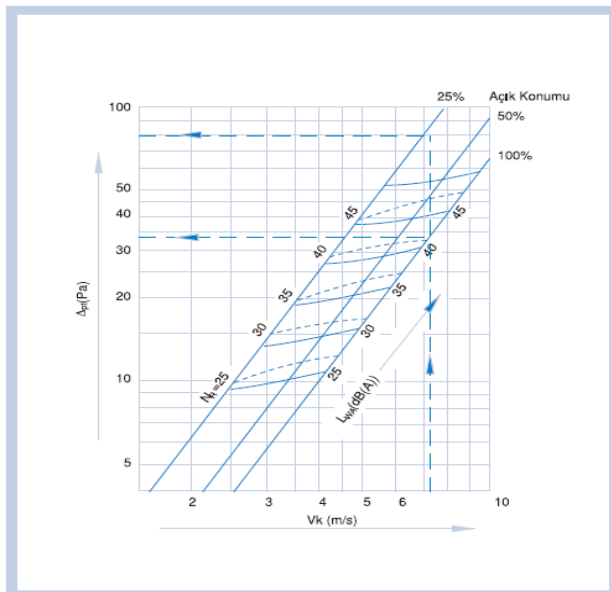
INDUCTION SELECTION DIAGRAM



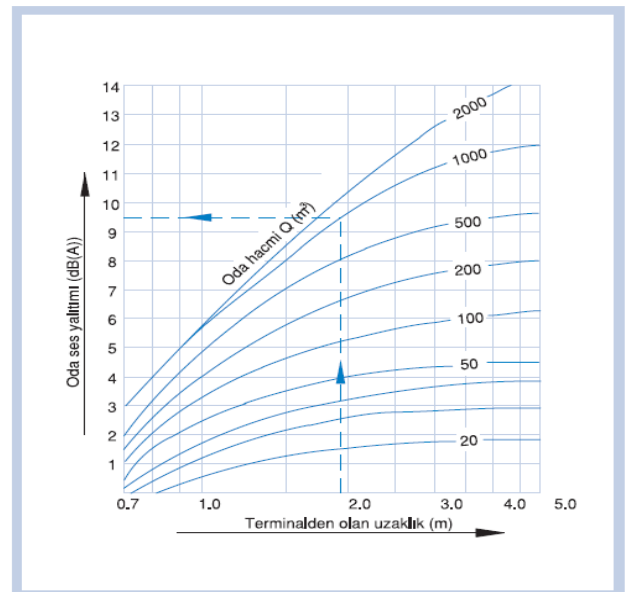
TEMPERATURE VARIABLE SELECTION



SOUND LEVEL AND PRESSURE LOSS DIAGRAM (BUTTERFLY DAMPER)



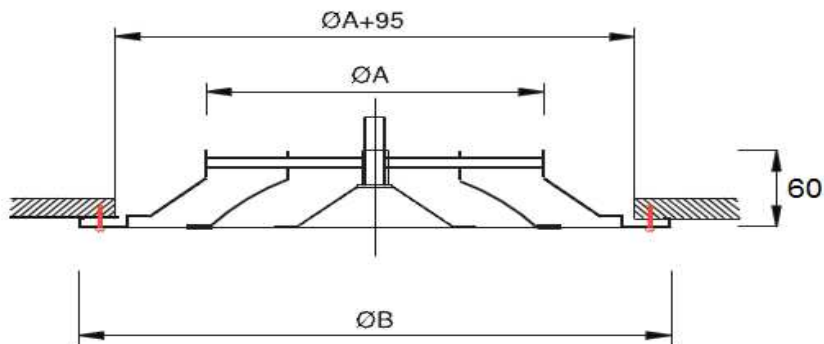
ROOM VOICE DELIVERY DIAGRAM





MOUNTING DETAILS

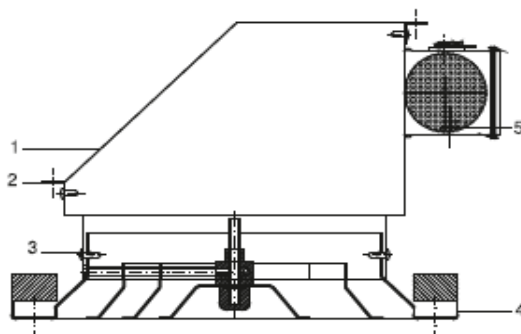
1- Screw Mounting Details



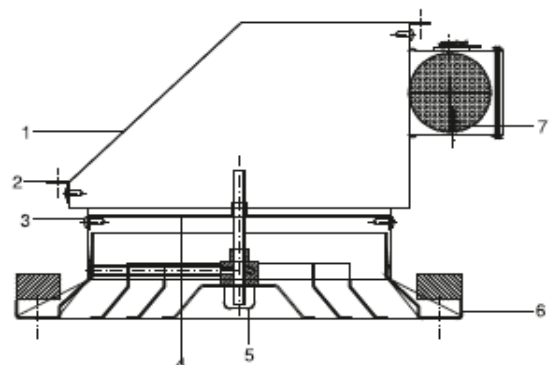
PLENUM BOX STANDARD MOUNTING



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

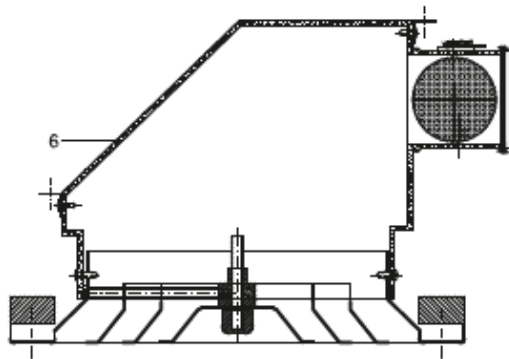


YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD BRIDGE MOUNTING (without insulation)



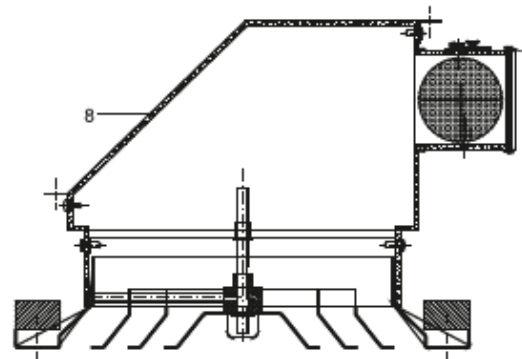


YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD SCREW MOUNTING (with insulation)



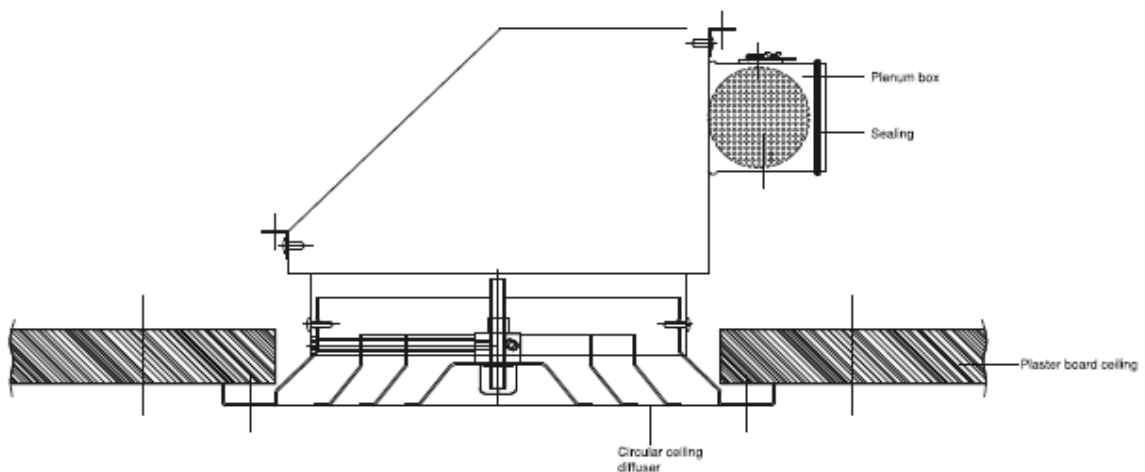
- 1-Plenum box
- 2-L Profile
- 3-Screw
- 4-Circular ceiling diffuser
- 5-Air control damper
- 6-Insulation

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



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

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

**DESCRIPTION:**

CAD: Circular ceiling diffuser with fixed core

MATERIAL:

Standard Production: Metal frame and core

APPLICATION:

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

FINISHING:

Powder coated in RAL 9016 (white) colour as standard

Other colours on request

INSTALLATION:

Screw {Standard}

No fixing

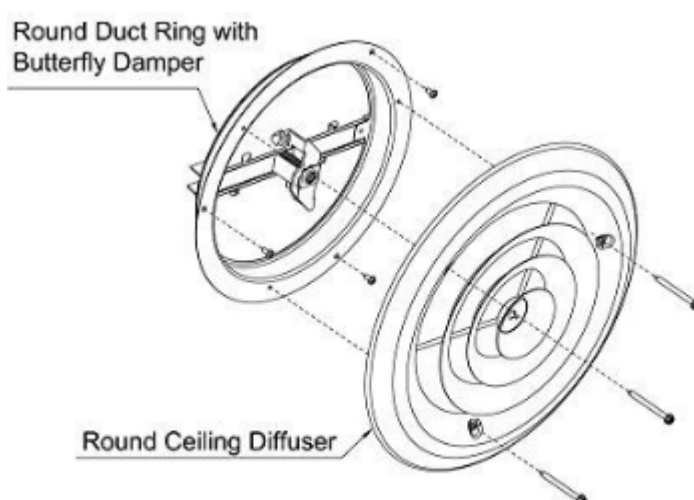
ACCESSORIES:

If desired, it is possible to add a damper to adjust the amount of air to be collected.

Butterfly Damper

**STANDARD SIZES (in):**

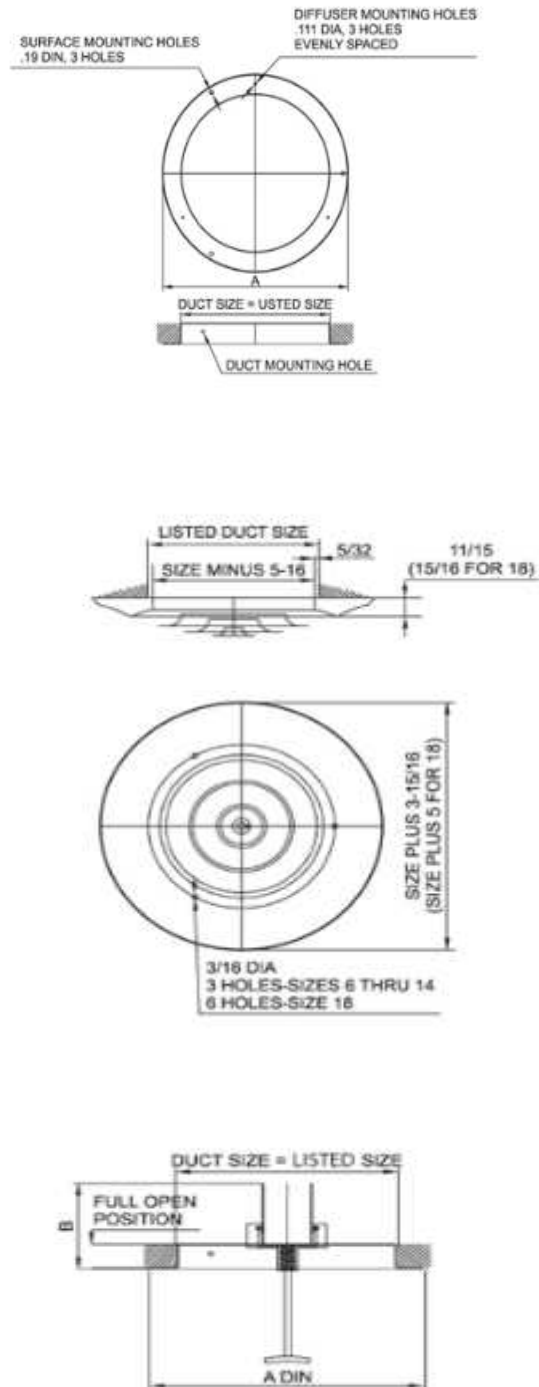
AVAILABLE SIZES (in.)			
NECK DIAMETER			
6"	8"	10"	12"
X	X	X	X



Use small screw holes for attaching damper to diffuser.
Larger screw holes can be used to attach damper to ductwork (optional)



OVERALL DIMENSION:





ORDER CODES:

CAD	S	A	xx	RAL9010	VD	D Ø 8"
S : Fixed core						D: Listed Size C: Frame Size
Sheet Metal frame and core : S					XX: without Mounting VD: Screw Mounting	
XX: WITHOUT DAMPER DD: WITH DAMPER					00: without coating EL: Anodic Aluminium RAL----: Powder Coated RAL	



DESCRIPTION:

CD: Circular ceiling diffuser with removable core.

MATERIAL:

- Standard Production : Aluminum frame and core

APPLICATION:

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

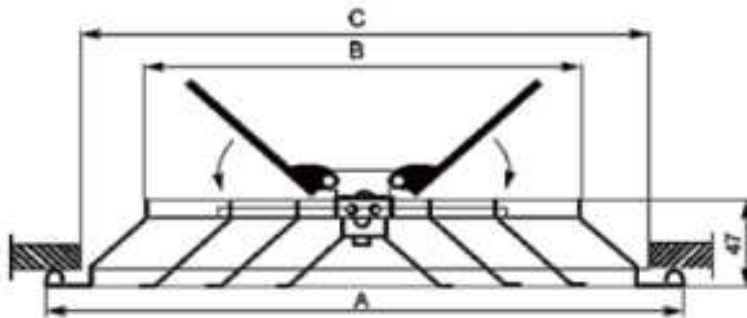


STANDARD SIZES (mm):

CD-RA	A	B	C
150	257	149	225
200	307	199	275
250	357	249	325
300	407	299	375
350	457	349	425

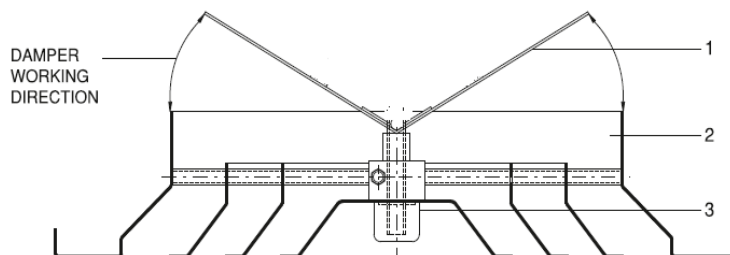
* Any combination of these sizes

TECHNICAL DRAWINGS:



CIRCULAR CEILING DIFFUSERS WITH BUTTERFLY DAMPER

- 1-BUTTERFLY DAMPER
- 2-CIRCULAR CEILING DIFFUSER
- 3-DAMPER ADJUST CATCH





EFFECTIVE AREA Ak(m2)

Neck Diameter ØDmm	Effective Area m2
150	0,0160
200	0,0280
250	0,0420
300	0,0580
350	0,0735

SELECTION TABLE

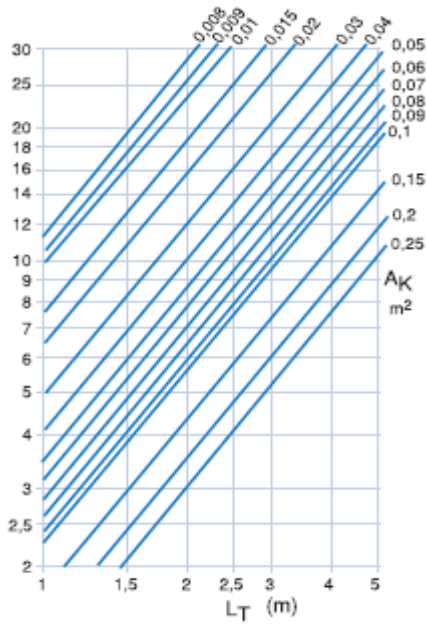
Neck Diameter ØDmm	Effective Area m2	AIR VELOCITY m/s								
		1,5	2,0	2,5	3,0	4,0	5,0	6,0	7,0	8,0
150	0,0160	86	115	144	173	230	288	346	403	461
200	0,0280	151	202	252	302	403	504	605	706	806
250	0,0420	227	302	378	454	605	756	907	1058	1210
300	0,0580	313	418	522	626	835	1044	1253	1462	1670
350	0,0735	397	529	662	794	1058	1323	1588	1852	2117

Flow Rate m³/h

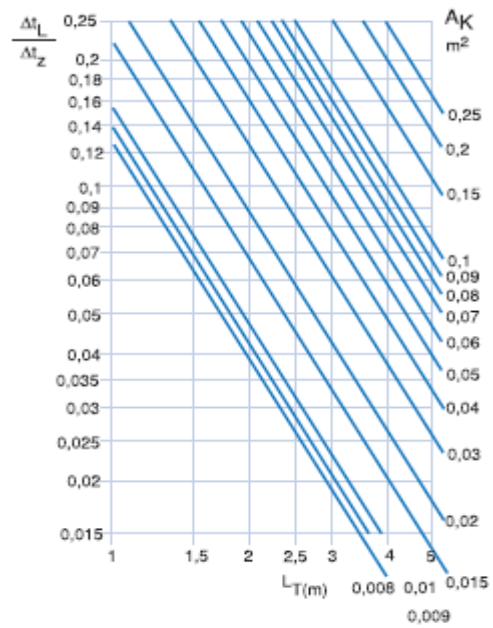


TEMPERATURE VARIABLES

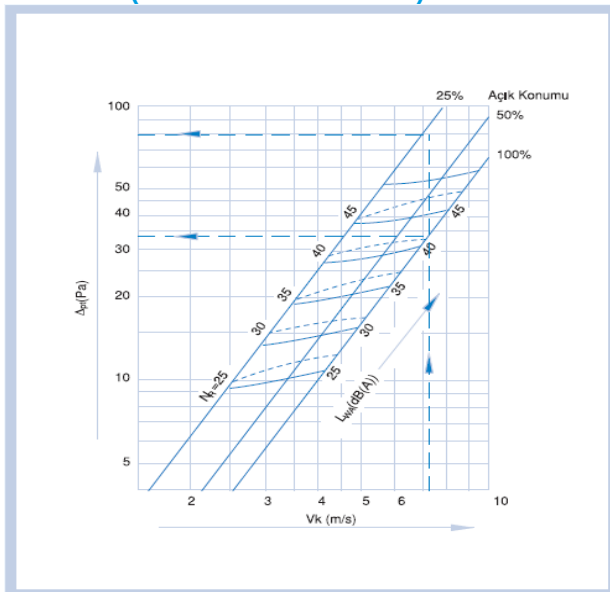
INDUCTION SELECTION DIAGRAM



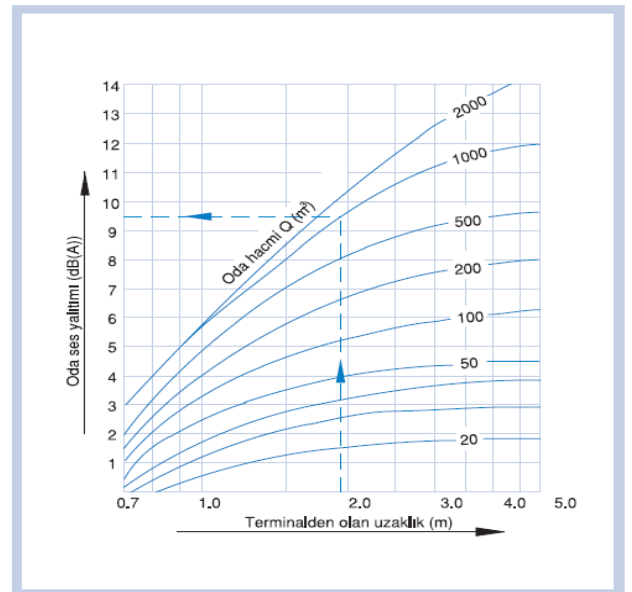
TEMPERATURE VARIABLE SELECTION



SOUND LEVEL AND PRESSURE LOSS DIAGRAM (BUTTERFLY DAMPER)



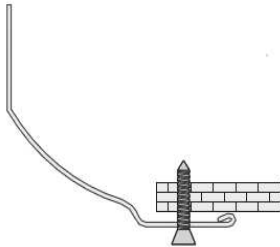
ROOM VOICE DELIVERY DIAGRAM





MOUNTING DETAILS

Screw Mounting Details

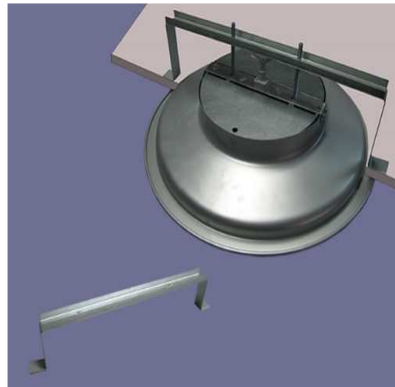
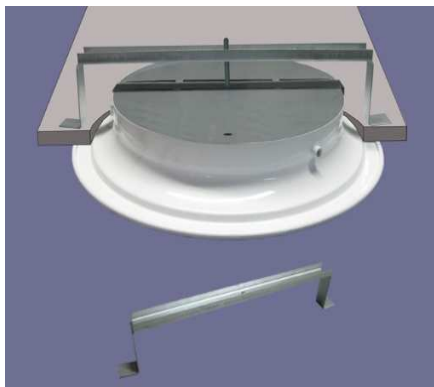


Frame Screw Mounting Type



Circular Duct type Mounting type

Bridged Mounting Details

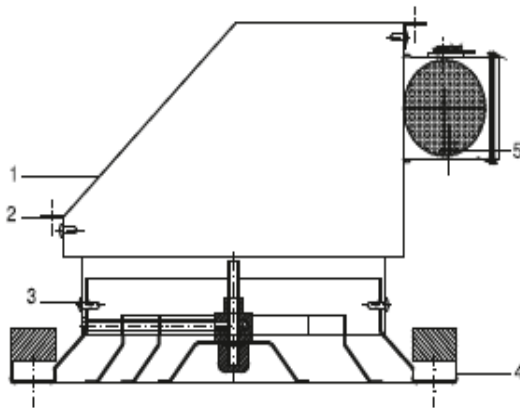




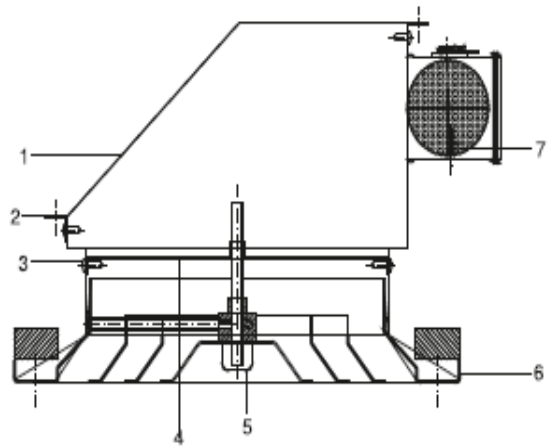
PLENUM BOX STANDARD MOUNTING



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

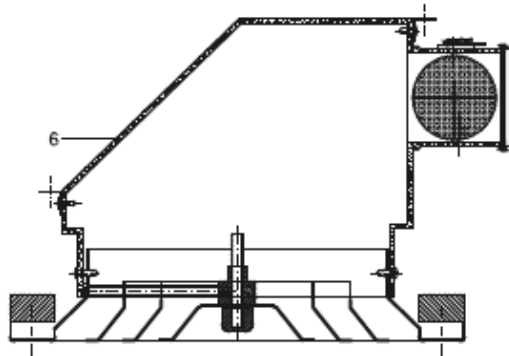


**YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD BRIDGE MOUNTING (without insulation)**



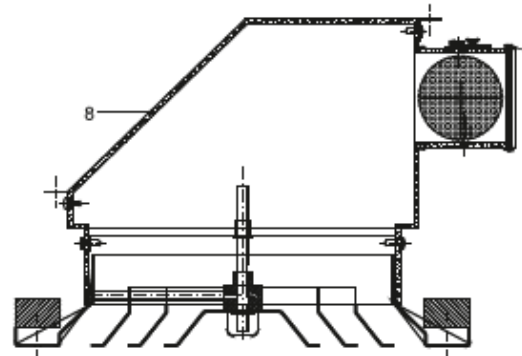


**YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD SCREW MOUNTING (with insulation)**



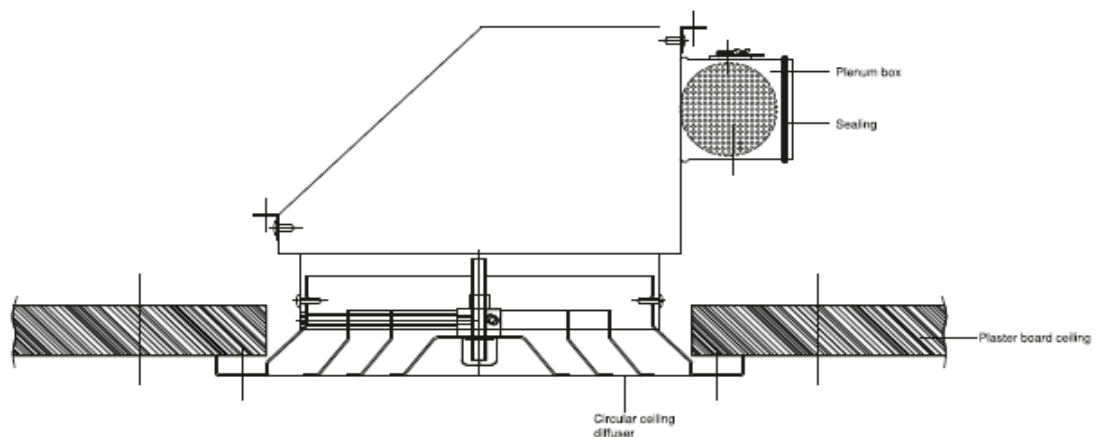
- 1-Plenum box
- 2-L Profile
- 3-Screw
- 4-Circular ceiling diffuser
- 5-Air control damper
- 6-Insulation

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



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

SPECIAL CEILING INSTALLATION DETAILS





ORDER CODES:

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



DESCRIPTION:

YTA-S: Circular ceiling diffuser with fixed core

YTA-A: Circular ceiling diffuser with removable core.

MATERIAL:

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

APPLICATION:

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

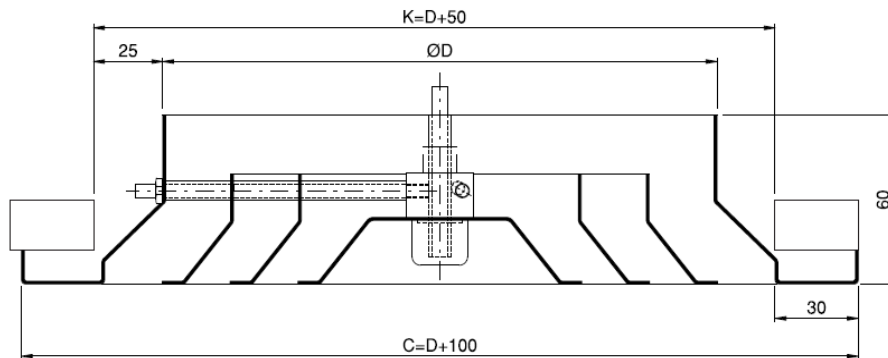


STANDARD SIZES (mm):

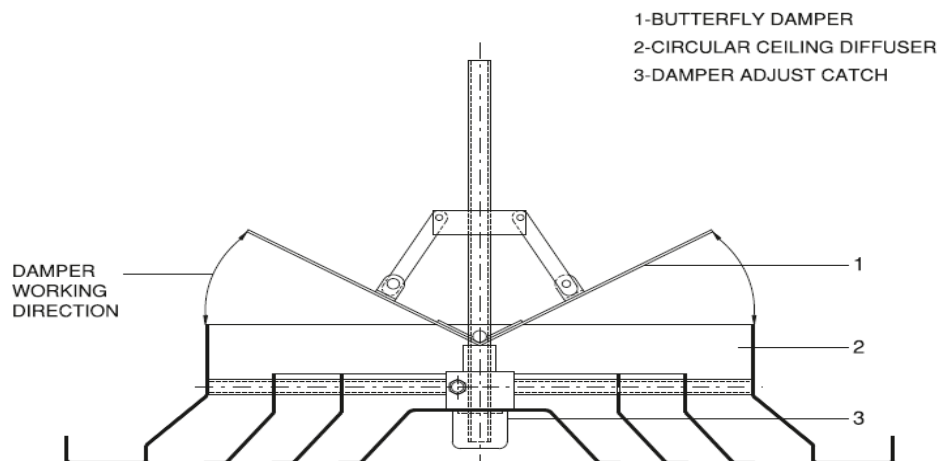
D	100	150	200	250	300	350	400	450	500
K	150	200	250	300	350	400	450	500	550
C	200	250	300	350	400	450	500	550	600

* Any combination of these sizes

TECHNICAL DRAWINGS:

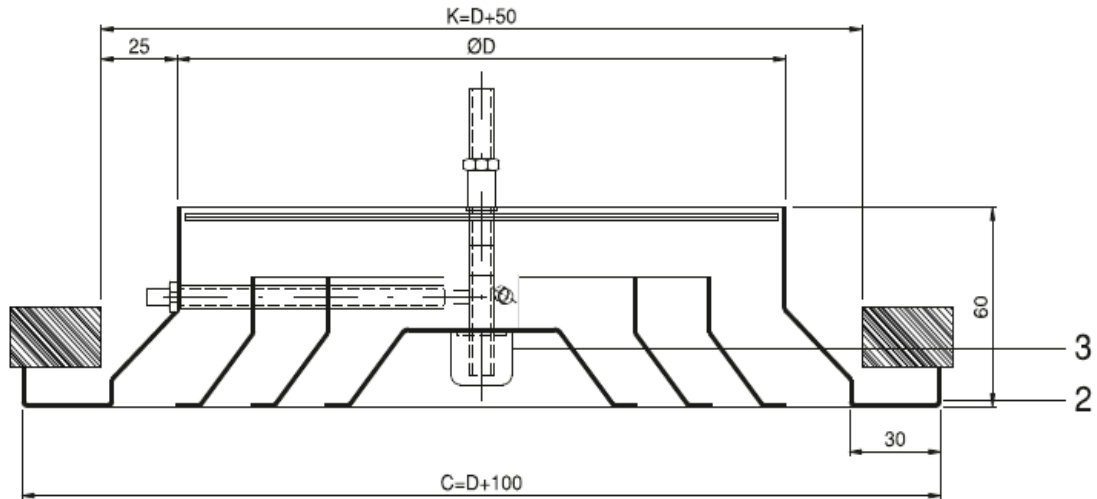


CIRCULAR CEILING DIFFUSERS WITH BUTTERFLY DAMPER

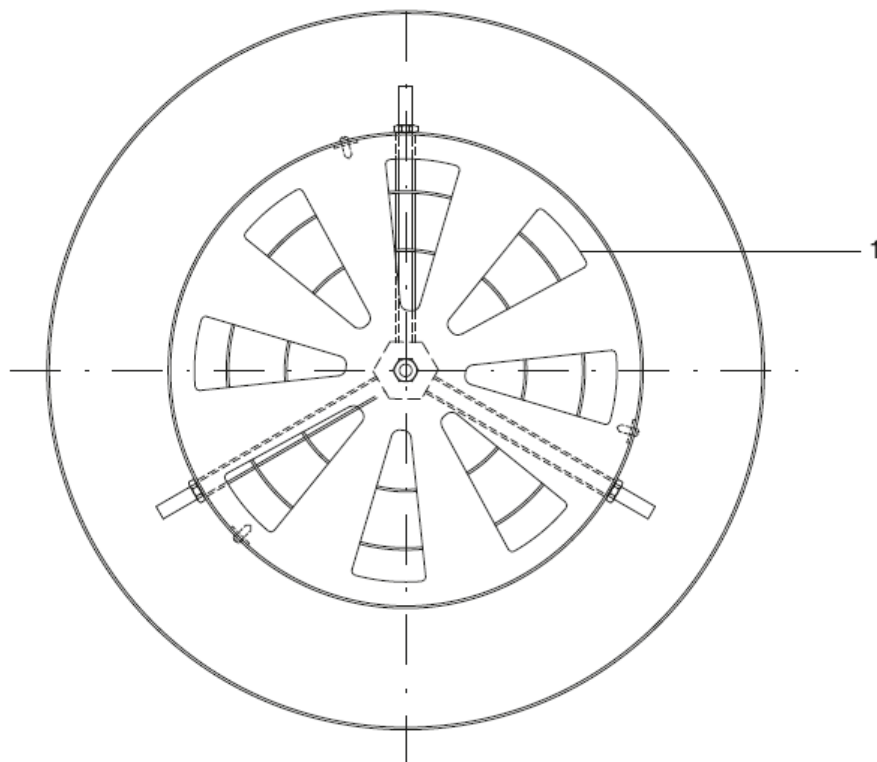




CIRCULAR CEILING DIFFUSERS WITH HIT AND MISS DAMPER



- 1-HIT AND MISS DAMPER
- 2-CIRCULAR CEILING DIFFUSER
- 3-DAMPER LEVER





EFFECTIVE AREA Ak(m2)

mm	100	150	200	250	300	350	400	450	500
Ak (m ²)	0,0040	0,0085	0,0157	0,0257	0,0381	0,0536	0,0730	0,0955	0,1150

CIRCULAR CEILING DIFFUSER QUICK SELECTION

Qv(m ³ /h)	ØD(mm)	100	150	200	250	300	350	400	450	500
	A (m ²)	0,0040	0,0085	0,0157	0,0257	0,0381	0,0536	0,0730	0,0955	0,1150
150	Lt (m)	1,0	0,6							
	NR	48	32							
	Pt (Pa)	54,0	18,0							
	Vk (m/s)	9,0	5,4							
200	Lt (m)	1,3	1,0	0,5						
	NR	>50	40	22						
	Pt (Pa)	>70	32,0	9,4						
	Vk (m/s)	12,2	7,0	3,8						
250	Lt (m)		1,2	0,8	0,5					
	NR		45	27	<20					
	Pt (Pa)		48,0	13,4	5,0					
	Vk (m/s)		8,8	4,6	2,8					
300	Lt (m)		1,8	1,1	0,7					
	NR		>50	33	20					
	Pt (Pa)		>70	19,6	8,0					
	Vk (m/s)		10,8	5,7	3,5					
400	Lt (m)			1,4	1,1	0,8	0,5			
	NR			42	25	<20	<20			
	Pt (Pa)			38,0	12,2	6,0	<5			
	Vk (m/s)			7,6	4,5	3,1	2,2			
500	Lt (m)			1,6	1,3	1,1	0,9	0,6		
	NR			50	34	23	<20	<20		
	Pt (Pa)			58,0	21,0	9,6	<5	<5		
	Vk (m/s)			9,4	5,8	3,9	2,7	2,0		
600	Lt (m)				1,6	1,3	1,1	0,9	0,6	
	NR				40	27	<20	<20	<20	
	Pt (Pa)				30,0	13,6	6,4	<5	<5	
	Vk (m/s)				6,9	4,6	3,3	2,4	1,8	
800	Lt (m)				2,0	1,7	1,4	1,3	1,1	1,0
	NR				48	35	25	<20	<20	<20
	Pt (Pa)				56,0	25,0	12,0	6,2	<5	<5
	Vk (m/s)				9,2	6,2	4,4	3,2	2,4	2,0
1000	Lt (m)					2,0	1,7	1,5	1,3	1,2
	NR					43	32	23	<20	<20
	Pt (Pa)					39,0	19,0	10,0	5,6	<5
	Vk (m/s)					7,8	5,6	4,0	3,0	2,4
1500	Lt (m)						2,5	2,2	1,9	1,7
	NR						46	35	27	22
	Pt (Pa)						49,2	24,0	13,6	8,8
	Vk (m/s)						8,4	6,1	4,6	3,7
2000	Lt (m)							2,8	2,5	2,2
	NR							44	35	30
	Pt (Pa)							41,8	24,0	16,0
	Vk (m/s)							8,0	6,1	5,0
3000	Lt (m)								3,5	3,2
	NR								48	42
	Pt (Pa)								50,2	37,0
	Vk (m/s)								9,1	7,5

SELECTION CRITERIAS

Ceiling Height H(m)=3±05

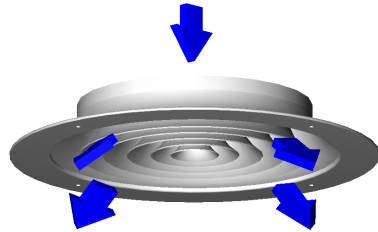
With ceiling effect

Damper %100 open

Table-1



CIRCULAR CEILING DIFFUSER SELECTION

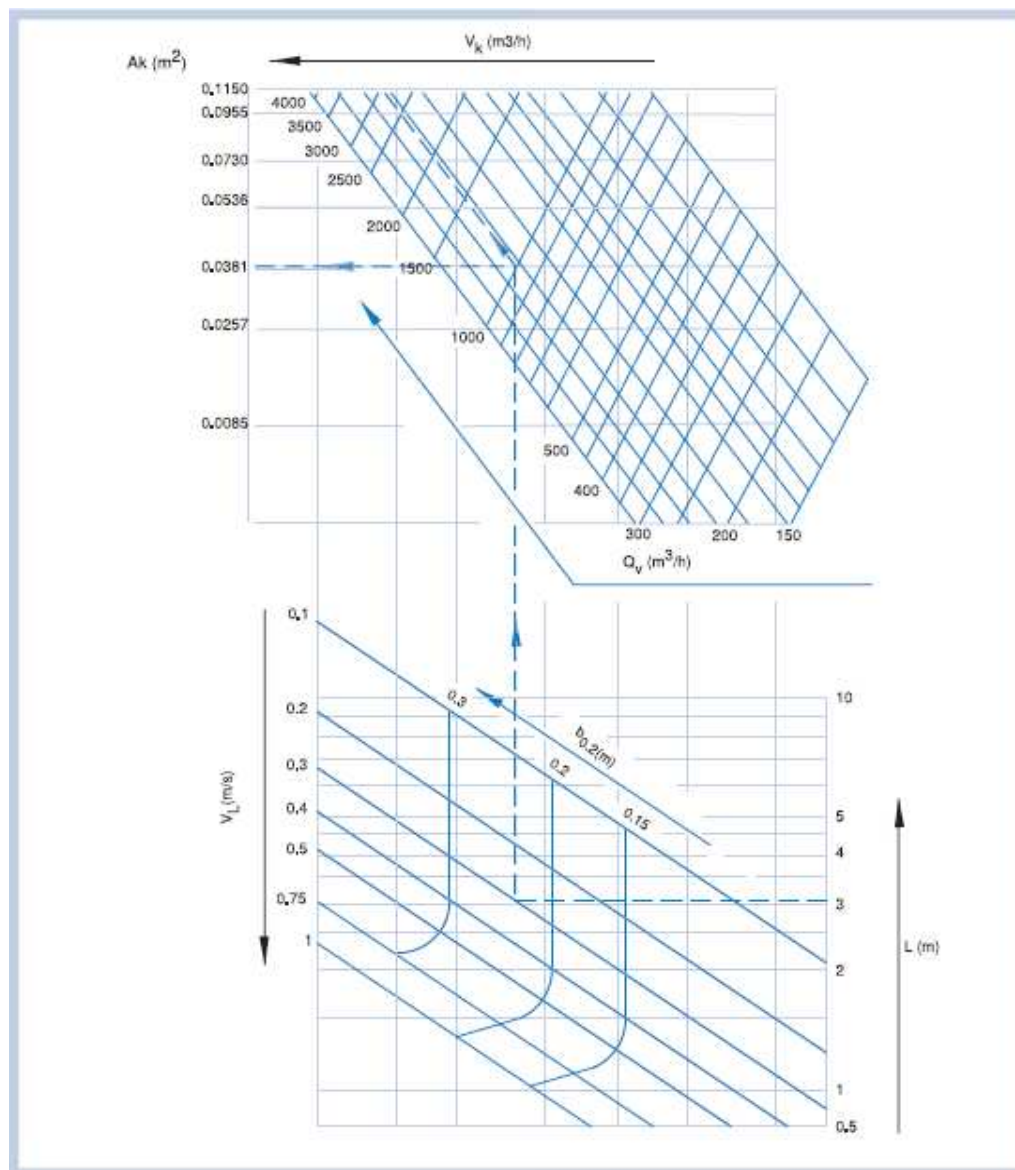


Neck Size Dimension ØDmm	Effective Area m2	AIR VELOCITY m/s																						
		1,5					2,0					2,5					3,0					4,0		
150	0,0085	45,90	m³/h	27,0	cfm	61,20	m³/h	36,0	cfm	76,50	m³/h	45,0	cfm	91,80	m³/h	54,0	cfm	122,40	m³/h	72,0	cfm			
200	0,0157	84,78	m³/h	49,9	cfm	113,04	m³/h	66,5	cfm	141,30	m³/h	83,2	cfm	169,56	m³/h	99,8	cfm	226,08	m³/h	133,0	cfm			
250	0,0257	138,78	m³/h	81,7	cfm	185,04	m³/h	108,9	cfm	231,30	m³/h	136,1	cfm	277,56	m³/h	163,3	cfm	370,08	m³/h	217,8	cfm			
300	0,0381	205,74	m³/h	121,1	cfm	274,32	m³/h	161,4	cfm	342,90	m³/h	201,8	cfm	411,48	m³/h	242,2	cfm	548,64	m³/h	322,9	cfm			
350	0,0536	289,44	m³/h	170,3	cfm	385,92	m³/h	227,1	cfm	482,40	m³/h	283,9	cfm	578,88	m³/h	340,7	cfm	771,84	m³/h	454,2	cfm			
400	0,0730	394,20	m³/h	232,0	cfm	525,60	m³/h	309,3	cfm	657,00	m³/h	386,6	cfm	788,40	m³/h	464,0	cfm	1051,20	m³/h	618,6	cfm			
450	0,0955	515,70	m³/h	303,5	cfm	687,60	m³/h	404,7	cfm	859,50	m³/h	505,8	cfm	1031,40	m³/h	607,0	cfm	1375,20	m³/h	809,3	cfm			
500	0,1150	621,00	m³/h	365,5	cfm	828,00	m³/h	487,3	cfm	1035,00	m³/h	609,1	cfm	1242,00	m³/h	730,9	cfm	1656,00	m³/h	974,6	cfm			
550	0,1920	1036,80	m³/h	610,2	cfm	1382,40	m³/h	813,5	cfm	1728,00	m³/h	1016,9	cfm	2073,60	m³/h	1220,3	cfm	2764,80	m³/h	1627,1	cfm			

Table-2



SELECTION DIAGRAM



SELECTION CRITERIAS

Ceiling Height $H(m)=3\pm05$

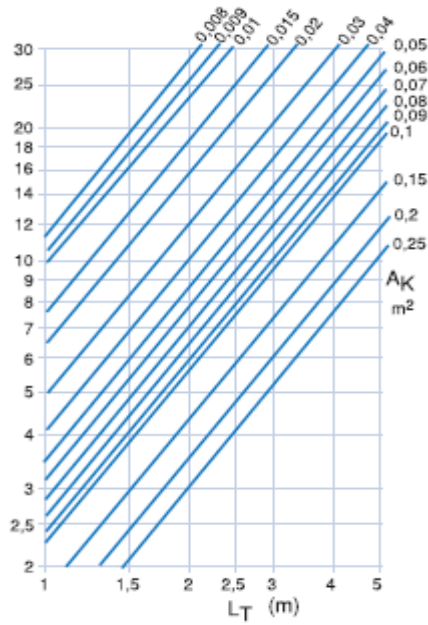
With ceiling effect

Damper %100 open

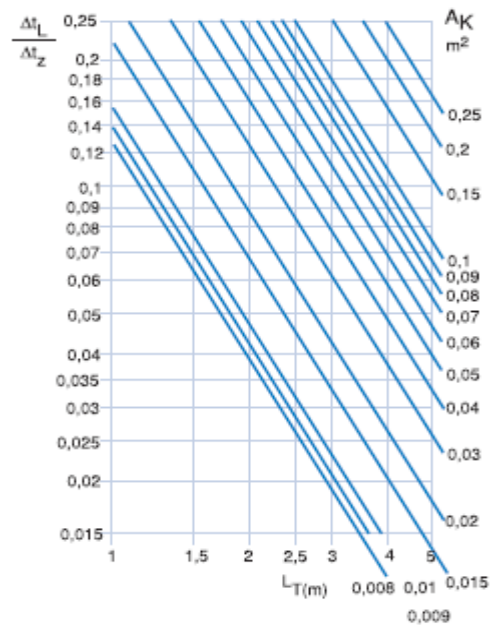


TEMPERATURE VARIABLES

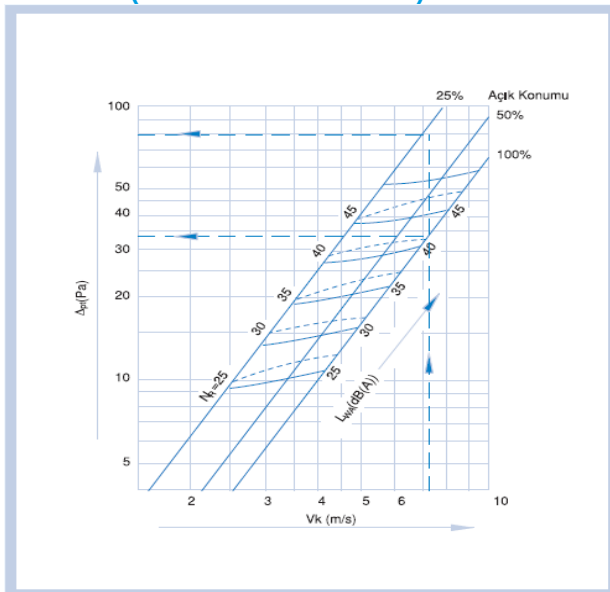
INDUCTION SELECTION DIAGRAM



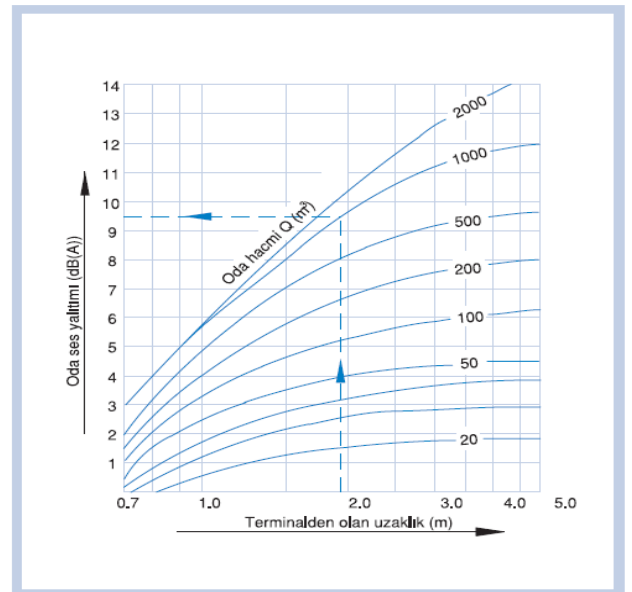
TEMPERATURE VARIABLE SELECTION



SOUND LEVEL AND PRESSURE LOSS DIAGRAM (BUTTERFLY DAMPER)



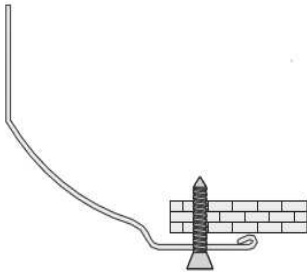
ROOM VOICE DELIVERY DIAGRAM





MOUNTING DETAILS

Screw Mounting Details



Frame Screw Mounting Type

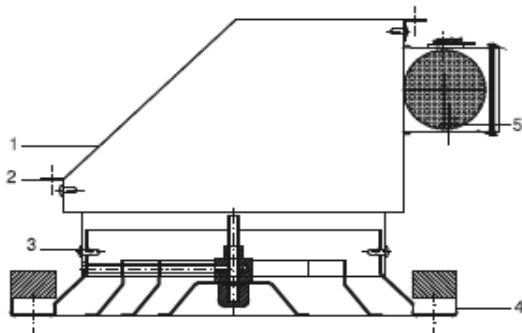


Circular Duct type Mounting Type

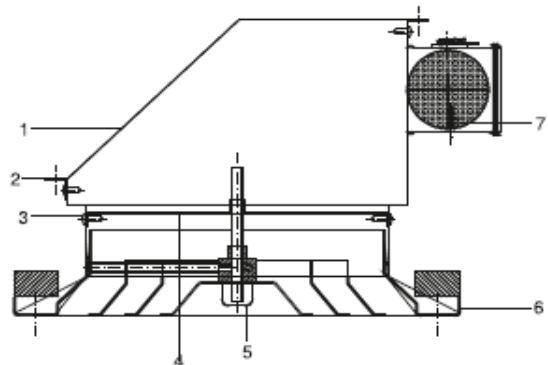
PLENUM BOX STANDARD MOUNTING



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

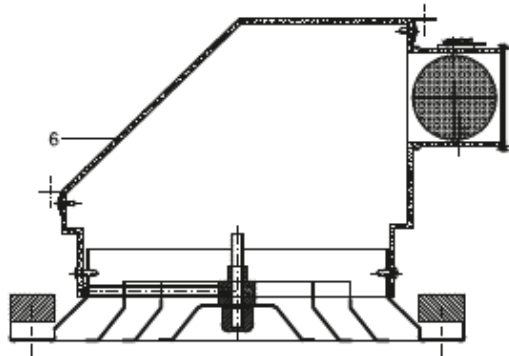


**YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD BRIDGE MOUNTING (without insulation)**



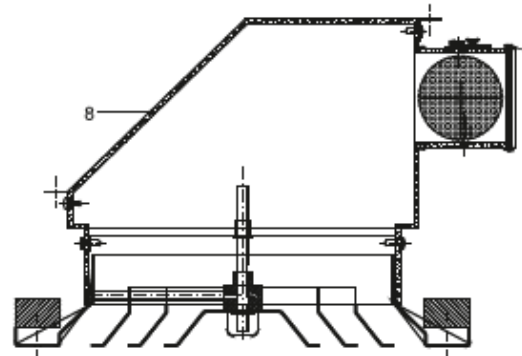


**YTA-CIRCULAR CEILING DIFFUSER
+ PLENUM BOX
STANDARD SCREW MOUNTING (with insulation)**



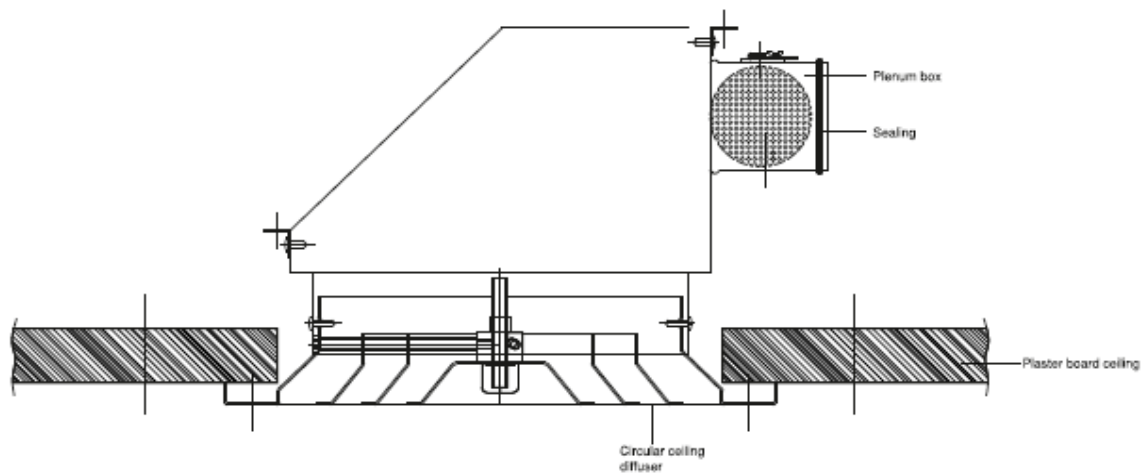
- 1-Plenum box
- 2-L Profile
- 3-Screw
- 4-Circular ceiling diffuser
- 5-Air control damper
- 6-Insulation

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



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

SPECIAL CEILING INSTALLATION DETAILS





ORDER CODES:

YTA	A	M	xx	RAL9010	VD	W Ø300
S : Fixed core A : Removable core						W: Neck Size C: Frame Size
Sheet 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