

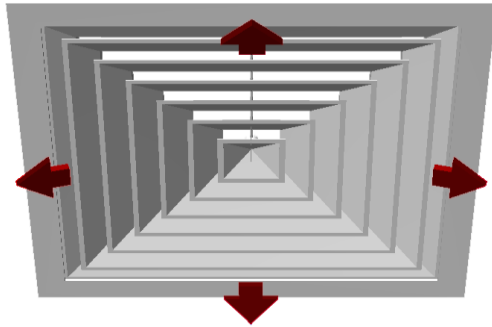
SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES



Square Ceiling Diffuser

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

KTA



DESCRIPTION:

KTA-S: Square ceiling diffuser with curved blades with fixed core

KTA-A: Square ceiling diffuser with curved blades with removable core

CONSTRUCTION:

Standard Product: Extruded Aluminum frame and core.

According to customer request: Extruded Aluminum frame, sheet core or sheet frame and core

APPLICATION:

Square ceiling diffuser can be manufactured according to the ceiling structure. It can be manufactured as 4-way as standard and can be manufactured as 1-2-3 way as optional. Square ceiling diffusers KTA... for supply of cooled and heated air offices, shopping center etc...

FINISHING:

- Powder coated in RAL 9010 color as standard
- Satin aluminum anodized
- Other colors on request

INSTALLATION:

- Screw {Standard}
- Clips
- Spring
- No Fixing

ACCESSORIES:

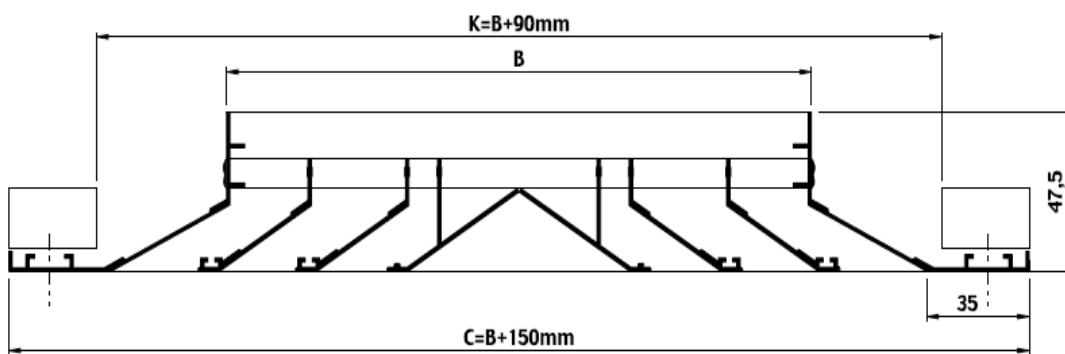
- PKD: Parallel blade damper, ZKD: Opposite blade damper

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

- PK: Plenum Box, KS: Mounting Frame
- 1,2,3-way models available

STANDARD SIZES:

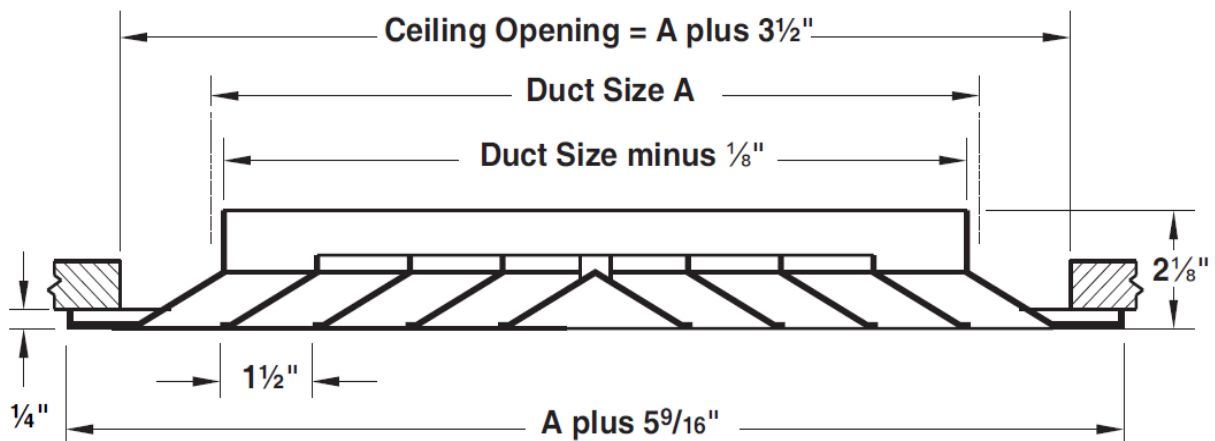
Metric System (mm):



B : 150 - 225 - 300 - 375 - 445* - 450 - 525 - 600 mm
 K : 240 - 315 - 390 - 465 - 535* - 540 - 615 - 690 mm
 C : 300 - 375 - 450 - 525 - 595* - 600 - 675 - 750 mm

* Karolaj system Ceiling diffuser is optional when requested.

Imperial system (in):

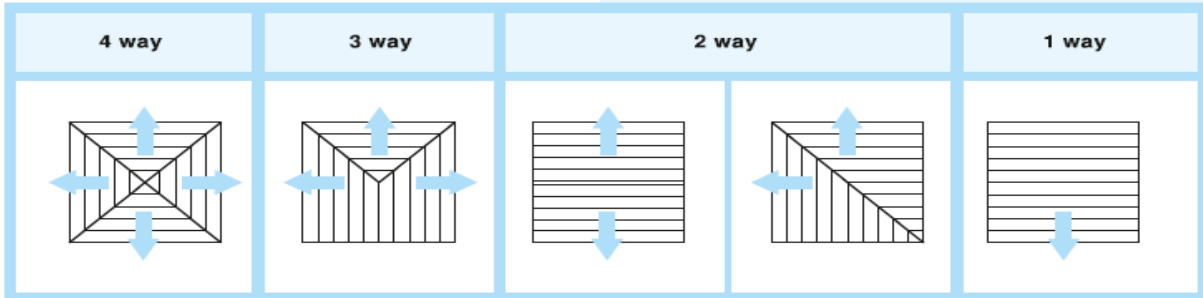


Duct Size A

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

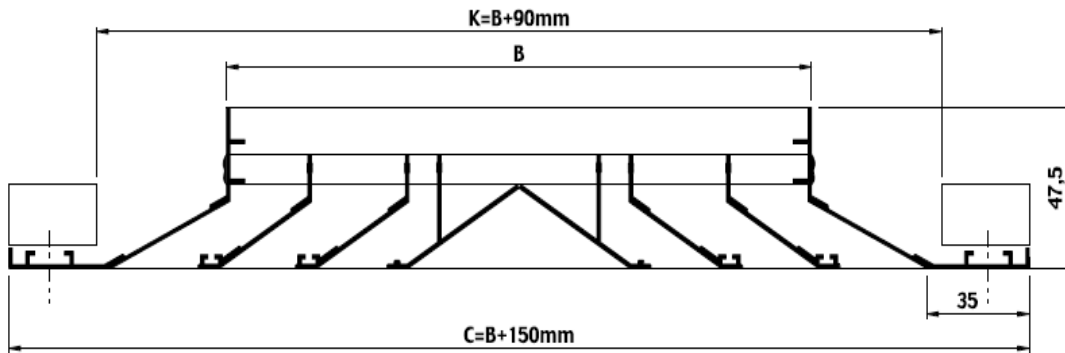
- * 6" x 6" * 9" x 9" * 12" x 12" * 18" x 18" * 24" x 24"
- * 8" x 8" * 10" x 10" * 15" x 15" * 21" x 21"

THROW DIRECTIONS:



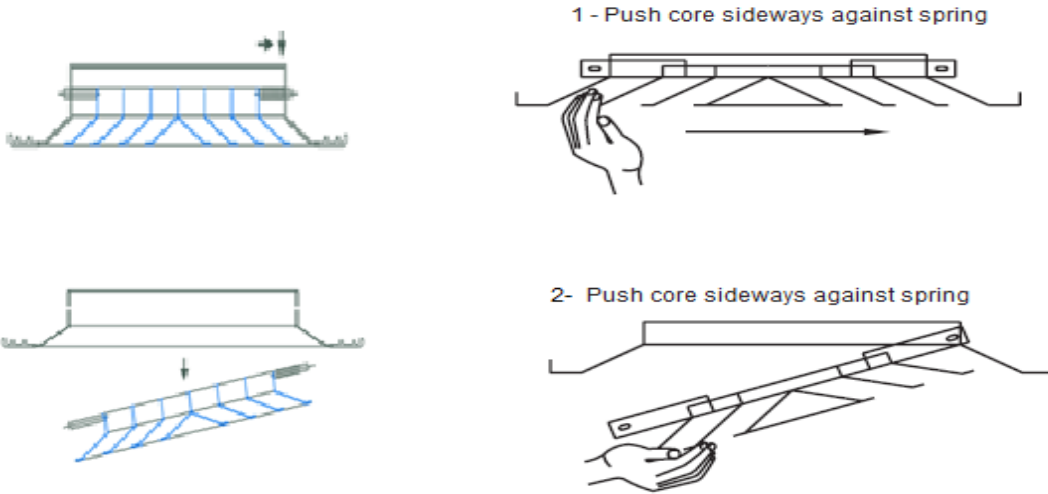
TECHNICAL DRAWINGS:

SQUARE CEILING DIFFUSER WITH REMOVABLE AND FIXED CORE

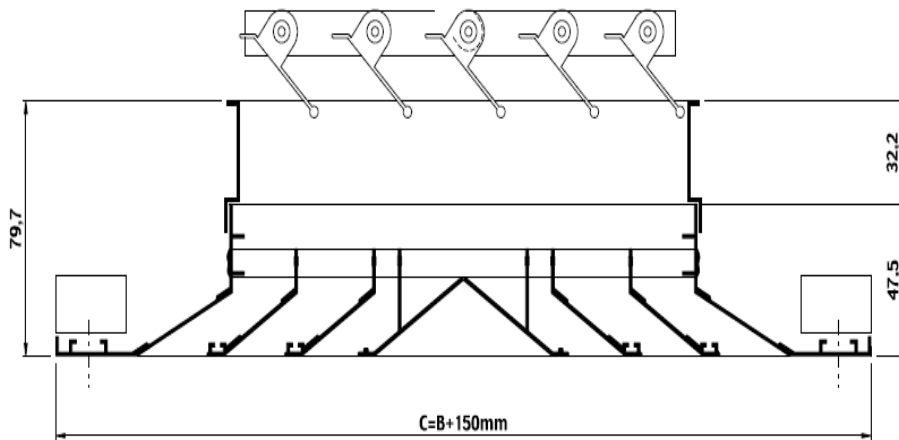


REMOVING CENTER CORE

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

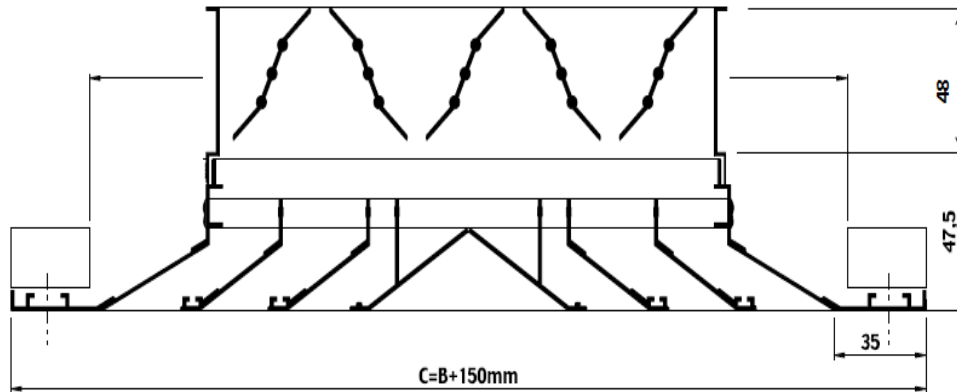


SQUARE CEILING DIFFUSER WITH PARALLEL BLADE DAMPER (KTA - PKD)



SQUARE CEILING DIFFUSER WITH OPPOSITE BLADE DAMPER (KTA - ZKD)

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES



SQUARE CEILING DIFFUSER SELECTION:

EFFECTIVE AREA Ak(m²)

Neck Size - mm	150x150	225x225	300x300	375x375	450x450	525x525	600x600
Effective Area-Ak m ²	0,0109	0,0244	0,0435	0,0679	0,0978	0,1331	0,1739

Table-1

QUICK SELECTION TABLE

Neck Size WxH mm x mm	Effective Area m ²	AIR VELOCITY m/s													
		1,5 m/s		2,0 m/s		2,5 m/s		3,0 m/s		4,0 m/s		5,0 m/s		6,0 m/s	
150x150	0,0109	58,86	m ³ /h	78,48	m ³ /h	98,10	m ³ /h	117,72	m ³ /h	156,96	m ³ /h	196,20	m ³ /h	235,44	m ³ /h
225x225	0,0244	131,76	m ³ /h	175,68	m ³ /h	219,60	m ³ /h	263,52	m ³ /h	351,36	m ³ /h	439,20	m ³ /h	527,04	m ³ /h
300x300	0,0435	234,90	m ³ /h	313,20	m ³ /h	391,50	m ³ /h	469,80	m ³ /h	626,40	m ³ /h	783,00	m ³ /h	939,60	m ³ /h
375x375	0,0679	366,66	m ³ /h	488,88	m ³ /h	611,10	m ³ /h	733,32	m ³ /h	977,76	m ³ /h	1222,20	m ³ /h	1466,64	m ³ /h
450x450	0,0978	528,12	m ³ /h	704,16	m ³ /h	880,20	m ³ /h	1056,24	m ³ /h	1408,32	m ³ /h	1760,40	m ³ /h	2112,48	m ³ /h
525x525	0,1331	718,74	m ³ /h	958,32	m ³ /h	1197,90	m ³ /h	1437,48	m ³ /h	1916,64	m ³ /h	2395,80	m ³ /h	2874,96	m ³ /h
600x600	0,1739	939,06	m ³ /h	1252,08	m ³ /h	1565,10	m ³ /h	1878,12	m ³ /h	2504,16	m ³ /h	3130,20	m ³ /h	3756,24	m ³ /h

Flow Rate m³/h



SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

Table-2

RECOMMENDED MAXIMUM AIRFLOW

Ceiling Height, ft.	8	9	10	12	15	20
Airflow, cfm, per Side	200	350	550	900	1500	4000

Table-3

CORRECTIONS FOR MODEL TDCA (ADJUSTABLE PATTERN CONTROLLERS)

Nominal Neck Size	NC (add)		Total Pressure (Multiply)		Vertical Throw (Multiply)		
	H	V	H	V	Cooling 20 F	Heating, ΔT	
						0 F	20 F
6 x 6	3	7	1.3	1.6	1.3	1.1	0.8
9 x 9	3	7	1.5	2.3	1.4	1.2	0.72
12 x 12	3	7	1.5	2.3	1.5	1.25	0.65
15 x 15	3	7	1.5	2.3	1.55	1.27	0.62
18 x 18	3	7	1.5	2.3	1.6	1.3	0.59
21 x 21	3	7	1.5	2.3	1.65	1.35	0.57
24 x 24	3	7	1.5	2.3	1.1	1.1	0.55

Table-4

1 and 2 Way Selection

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

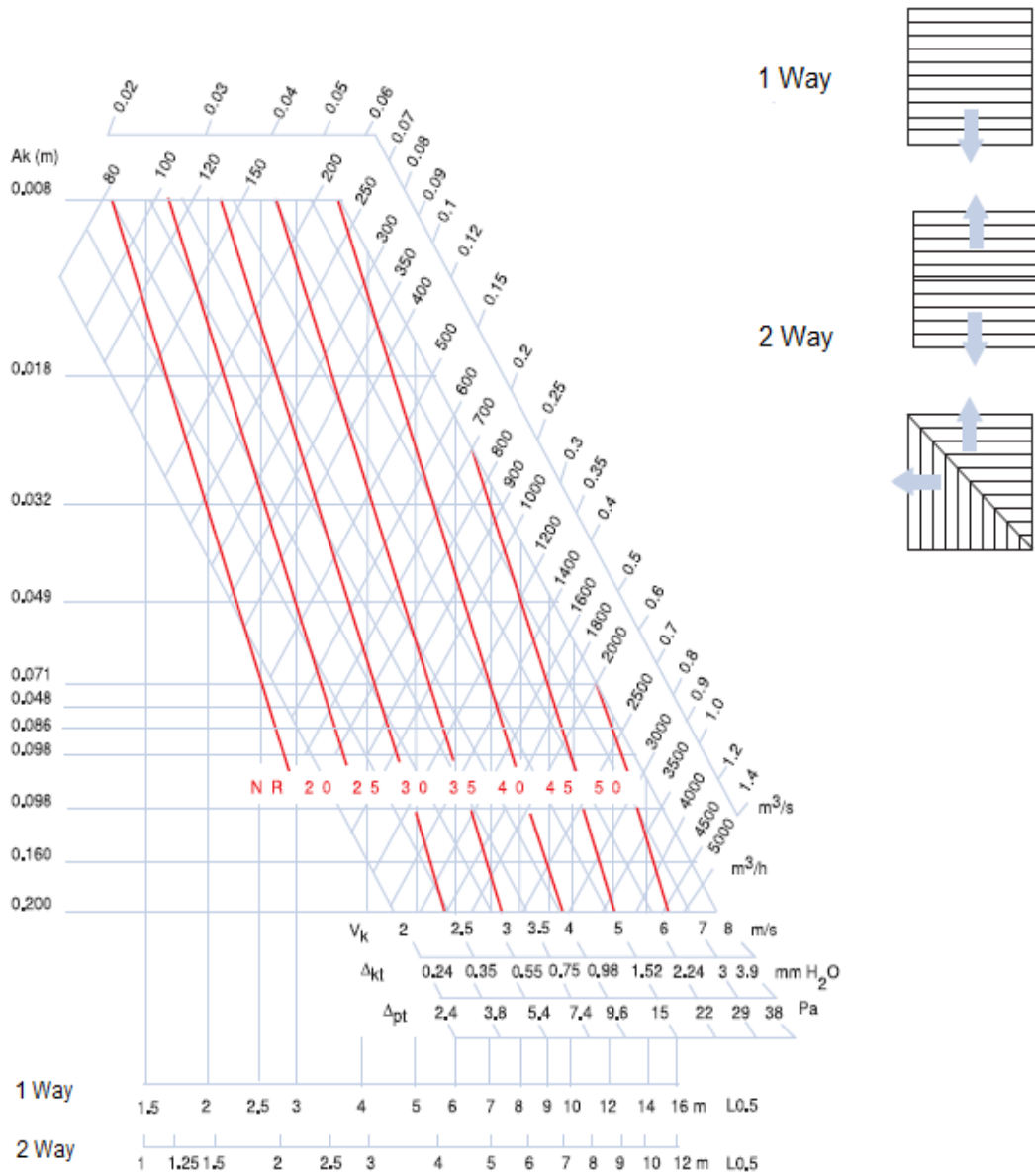


Diagram-1

3 and 4 Way Selection

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

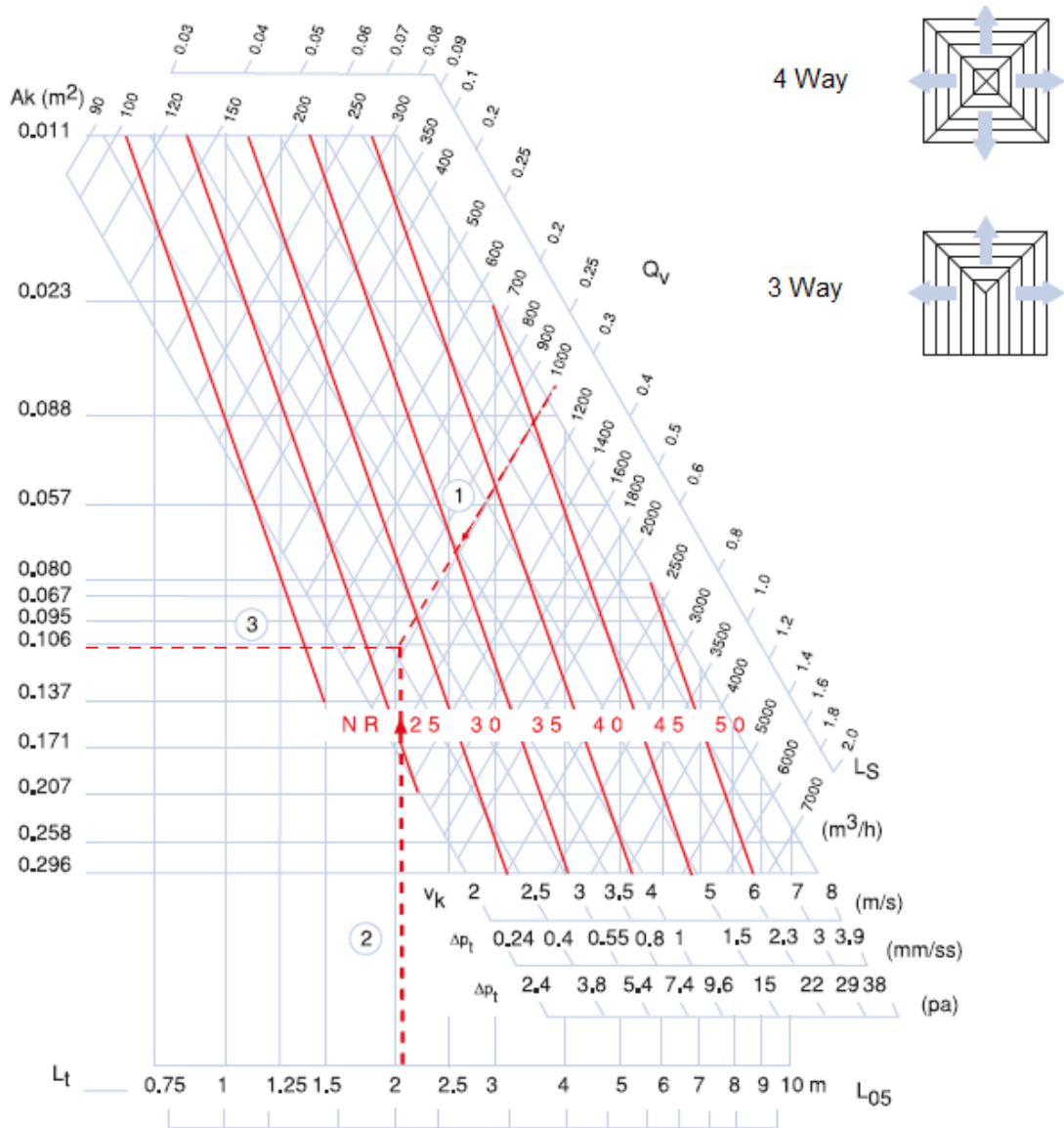


Diagram-2

V_t (m/s) Shooting Distance Correction Table

V _t (m/s)	0,25	0,375	0,5	0,625	0,75
L _t (m)	x 2	x 1,33	x 1	x 0,8	x 0,67

Table-5

Sound Level and Pressure Loss Correction Chart by Pressure Control Damper Open Position

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

Damper Position	100 % Open	50 % Open	25 % Open
Pt X 1.00	Pt X 1.00	Pt X 2.25	Pt X 5.90
LW + 0	LW + 0	LW +10	LW +20

Table-6

AIR DISTRIBUTION DIAGRAM

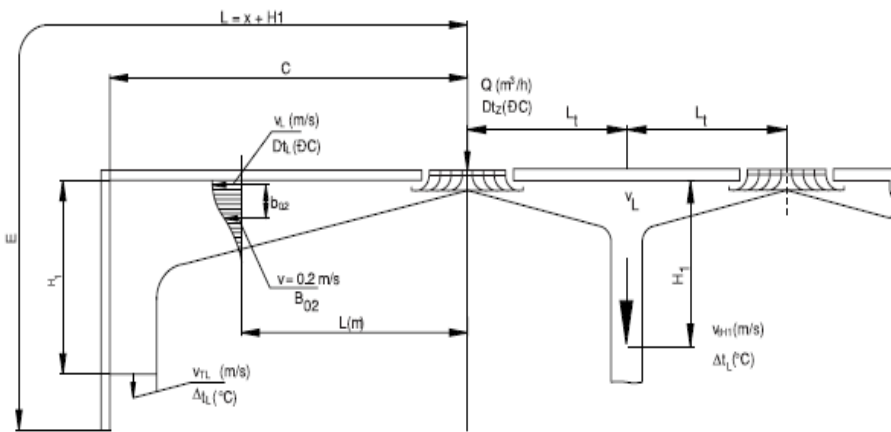


Diagram-3

9" x 9" Model TDC / 4-Way Diffuser
 240 cfm Total
 20°F Cooling Differential

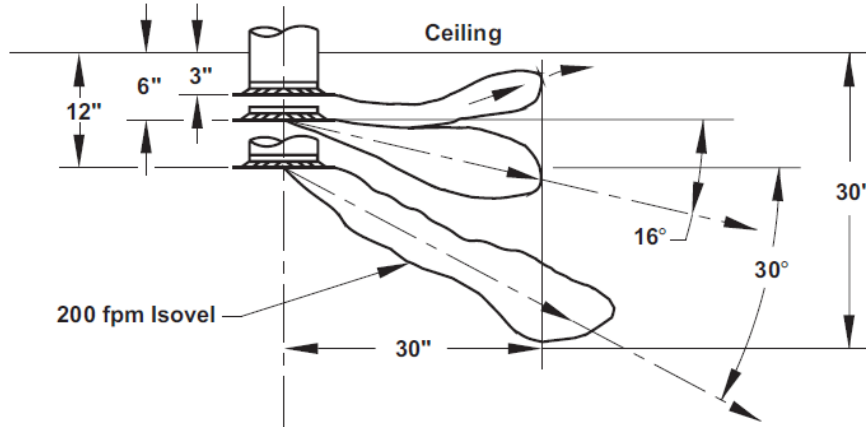


Diagram-4

IMPERIAL PERFORMANCE DATA



SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

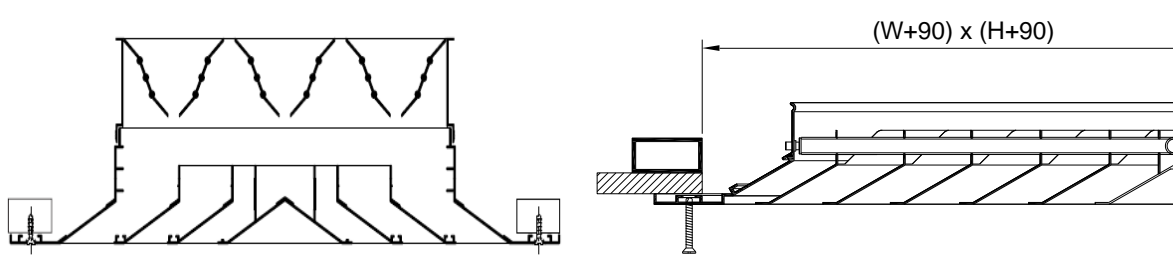
		Neck Vel. Vel. Pressure	300 0.006 0.042	400 0.010 0.075	500 0.016 0.117	600 0.022 0.169	700 0.031 0.229	800 0.040 0.300	900 0.050 0.379
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	75 - -	100 13 -	125 16 -	150 23 -	175 27 -	200 31 -	225 34 -
6 x 6 0.25 ft²	S1	X	75 8-10-14	100 9-11-18	125 10-13-18	150 11-14-20	175 12-15-21	200 13-18-23	225 14-17-24
	S2&G2	X & Y	38 4-8-10	50 5-8-12	63 8-10-14	75 8-10-15	88 9-11-18	100 10-12-17	113 10-13-18
	A3	X	28 4-8-9	38 5-7-11	47 8-8-12	58 7-8-13	68 8-10-14	75 8-11-15	84 8-11-16
	A4	Y	19 3-5-8	25 4-7-9	31 8-7-10	38 7-8-11	44 7-9-12	50 8-8-13	58 8-10-14
		Total cfm NC Side	169 - -	225 15 -	281 21 -	338 26 -	394 30 -	450 34 -	506 37 -
9 x 9 0.56 ft²	S1	X	169 11-15-21	225 14-17-24	281 18-19-27	338 17-21-30	394 18-23-32	450 20-24-34	506 21-28-38
	S2&G2	X & Y	84 8-9-18	113 8-11-18	141 10-14-20	169 11-18-22	187 13-17-24	225 16-18-28	253 18-19-27
	A3	X	83 8-10-14	84 8-11-16	106 10-13-18	127 11-14-20	148 12-16-21	188 13-18-23	180 14-17-24
	A4	Y	42 4-7-12	58 7-10-14	70 8-11-16	84 10-12-17	98 11-13-18	113 11-14-20	127 12-15-21
		Total cfm NC Side	300 - -	400 17 -	500 23 -	600 28 -	700 32 -	800 35 -	900 38 -
12 x 12 1.00 ft²	S1	X	300 15-20-28	400 18-23-32	500 21-25-38	600 23-28-39	700 25-30-43	800 28-32-48	900 28-34-48
	S2&G2	X & Y	150 8-11-21	200 10-15-24	250 13-18-27	300 15-21-30	350 18-23-32	400 20-24-34	450 21-28-38
	A3	X	113 11-13-18	150 12-15-21	188 14-17-24	225 15-18-28	283 18-20-28	300 17-21-30	338 18-23-32
	A4	Y	75 8-10-16	100 9-13-19	125 11-15-21	150 13-18-23	175 14-17-25	200 15-18-28	225 16-20-28
		Total cfm NC Side	469 11 -	625 19 -	781 25 -	938 29 -	1094 33 -	1250 37 -	1406 40 -
15 x 15 1.56 ft²	S1	X	469 18-25-35	625 23-29-40	781 28-32-45	938 29-35-49	1094 31-38-53	1250 33-40-57	1406 35-43-60
	S2&G2	X & Y	234 10-14-28	313 13-18-30	391 16-24-34	469 18-28-37	547 22-28-40	625 25-30-43	703 28-32-45
	A3	X	178 13-18-23	234 15-19-27	293 17-21-30	352 18-23-33	410 20-25-35	488 22-27-38	527 23-28-40
	A4	Y	117 7-12-20	158 11-16-23	185 14-18-28	234 18-20-28	273 18-22-31	313 18-23-33	352 20-25-35
		Total cfm NC Side	675 12 -	900 20 -	1125 26 -	1350 31 -	1575 35 -	1800 38 -	2025 41 -
18 x 18 2.25 ft²	S1	X	675 23-30-42	900 28-34-48	1125 31-38-54	1350 34-42-58	1575 37-45-84	1800 38-48-88	2025 42-51-73
	S2&G2	X & Y	338 11-17-31	450 15-23-36	583 19-29-41	675 23-31-44	788 27-34-48	900 30-38-51	1013 31-38-54
	A3	X	253 18-20-28	338 18-23-32	422 21-25-38	508 23-28-39	591 24-30-42	675 26-32-45	759 28-34-48
	A4	Y	188 9-15-24	225 13-20-28	281 17-22-31	338 20-24-34	384 21-28-37	450 23-28-39	508 24-30-42
		Total cfm NC Side	919 13 -	1225 21 -	1531 27 -	1838 32 -	2144 36 -	2450 39 -	2756 42 -
21 x 21 3.06 ft²	S1	X	919 27-35-48	1225 33-40-58	1531 38-45-83	1838 40-48-89	2144 43-53-75	2450 46-58-80	2756 48-80-85
	S2&G2	X & Y	459 13-20-37	613 18-27-42	788 22-33-47	919 27-37-52	1072 31-40-58	1225 35-42-60	1378 37-45-63
	A3	X	345 18-23-32	459 22-28-37	574 24-30-42	688 28-32-48	804 28-35-49	919 31-37-53	1034 32-40-58
	A4	Y	230 10-17-28	308 16-23-32	383 19-28-38	459 23-28-40	538 25-30-43	613 27-32-48	688 28-34-49
		Total cfm NC Side	1200 14 -	1600 22 -	2000 28 -	2400 32 -	2800 36 -	3200 40 -	3600 43 -
24 x 24 4.00 ft²	S1	X	1200 31-39-58	1600 37-48-84	2000 42-51-72	2400 48-58-79	2800 49-58-85	3200 53-64-91	3600 58-68-97
	S2&G2	X & Y	600 15-23-42	800 20-30-48	1000 25-38-54	1200 30-42-59	1400 35-45-84	1600 38-48-88	1800 42-51-72
	A3	X	450 21-28-37	600 25-30-43	750 28-34-48	900 30-37-52	1050 33-40-58	1200 35-43-60	1350 37-45-64
	A4	Y	300 12-20-32	400 18-28-37	500 22-29-41	600 28-32-45	700 28-35-49	800 30-37-52	900 32-38-58

Table-7

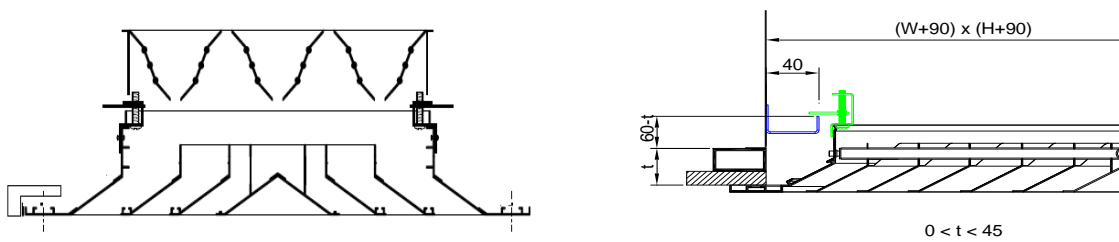
SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

MOUNTING DETAILS

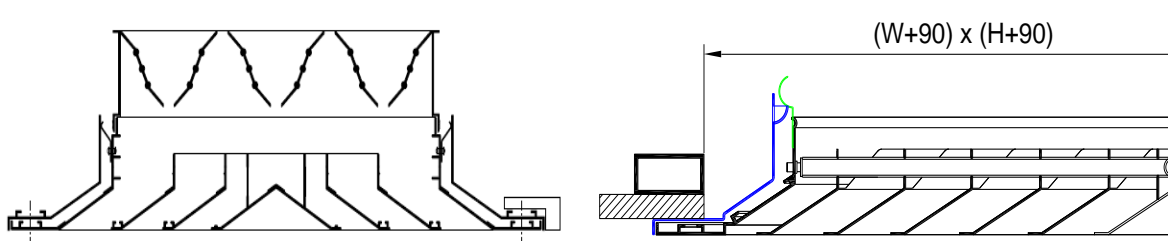
Screw Mounting Details



Clips Mounting Details



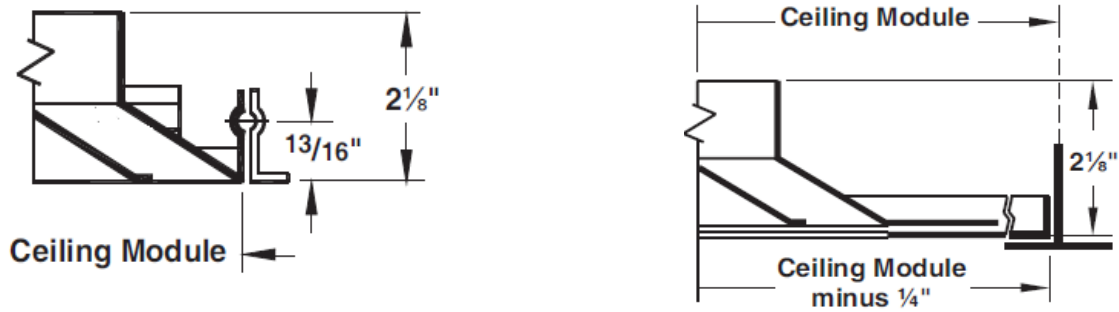
Spring Mounting Details



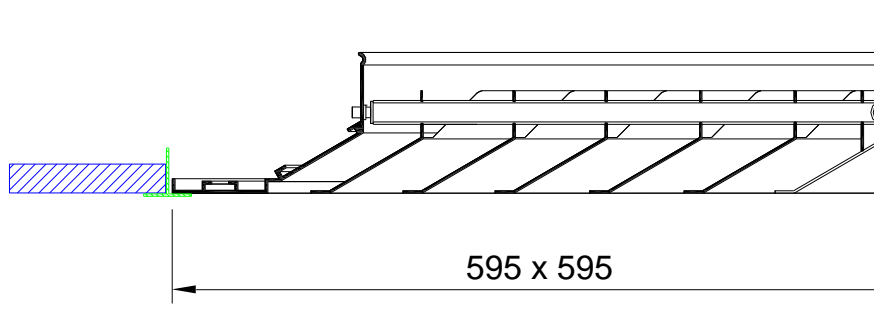
Snap-in

Lay-in

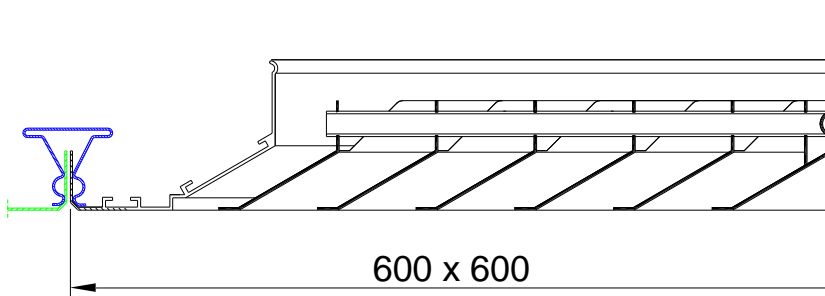
SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES



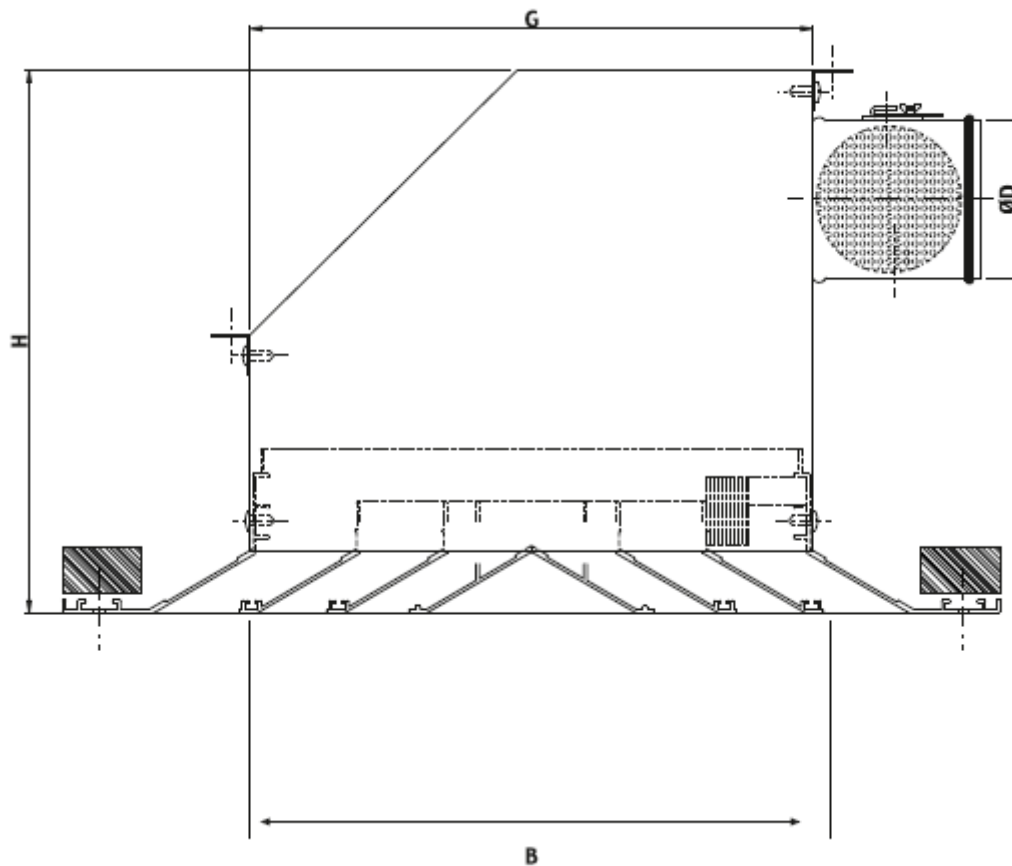
Karolaj Ceiling Mounting Details



Clipin Ceiling Mounting Details



PLENUM BOX MOUNTING DETAILS

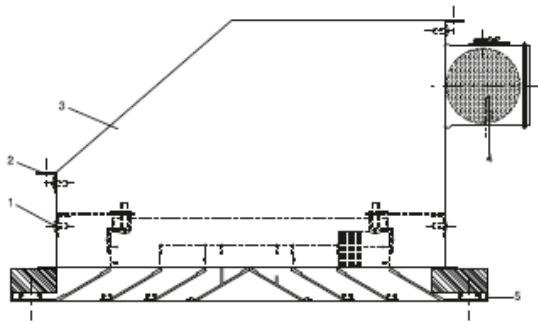


SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

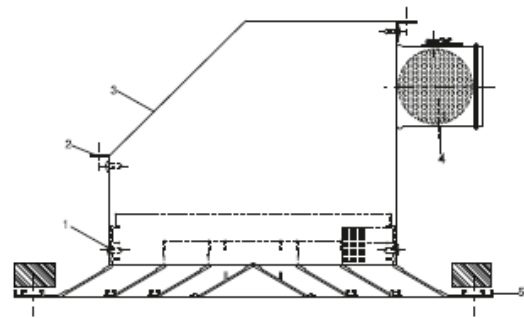
PLENUM BOX DIMENSION

B	150	225	300	375	445	450	485	525	600
D	100	150	200	250	250	250	250	300	300
H	250	300	400	450	450	450	450	500	500
G	153	228	303	378	448	543	488	525	603

CEILING MOUNTING DETAILS



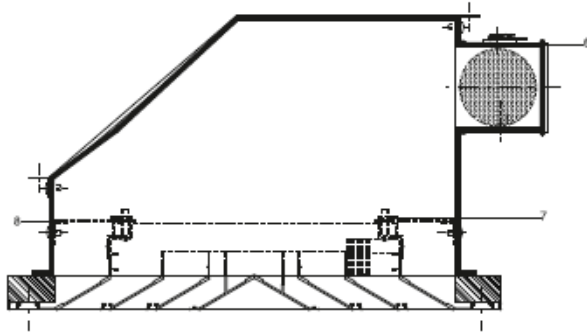
CLIPS MOUNTING (without insulation)



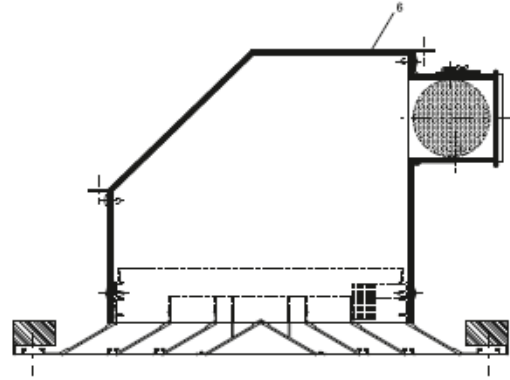
SCREW MOUNTING (without instulation)

- 1-Screw
- 2-L Profile
- 3-Plenum box
- 4-Perforated damper
- 5-Square ceiling diffuser
- 6-Insulation
- 7-Clips
- 8-L profile for clips

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES



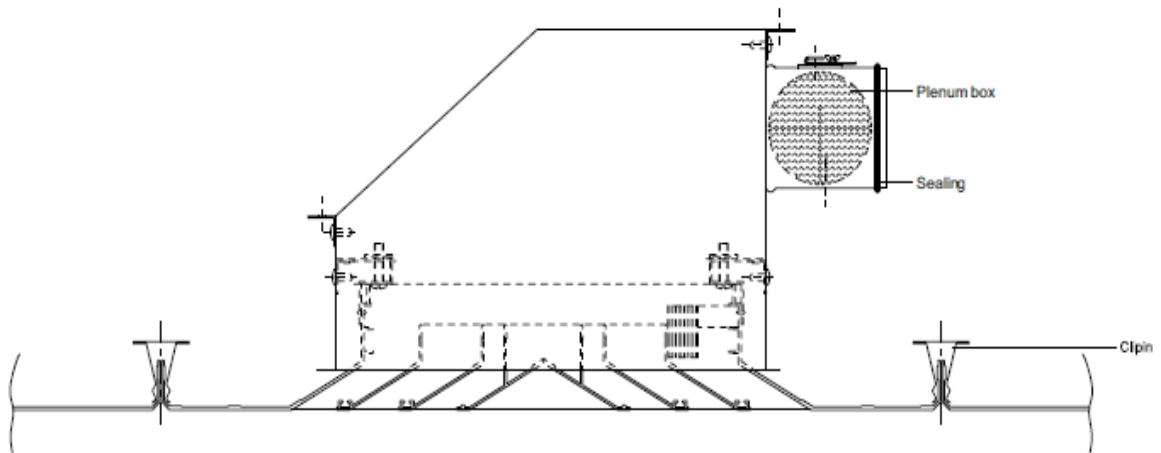
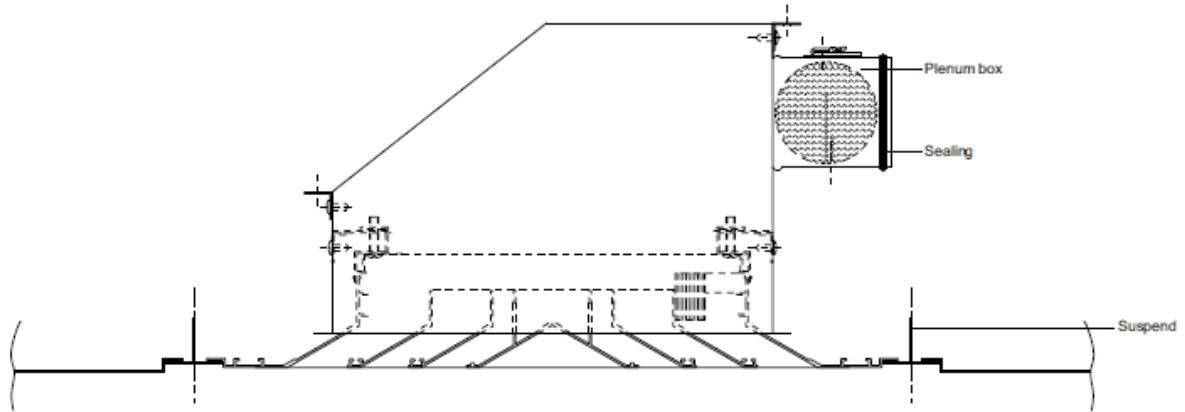
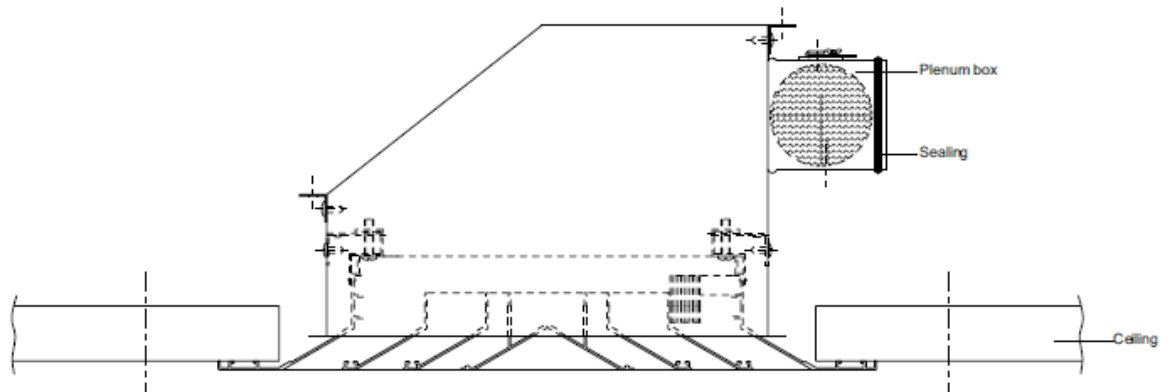
CLIPS MOUNTING (with insulation)



SCREW MOUNTING (with insulation)

SPECIAL CEILING MOUNTING DETAILS

SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES





SQUARE CEILING DIFFUSERS / KTA 1-2-3-4 WAY SERIES

ORDER CODE

KTA	A	4	PKD	RAL9010	VD	W 300X300
S : Fixed Core A : Adjustable Core						W: Neck Size C: Frame Size
1 Way = 1 2 Way = 2 3 Way = 3 4 Way = 4						XX: without Mounting VD: Screw Mounting KP: Bridge Mounting KS: Mounting Frame
000: Without Damper ZKD: Opposite Blade Damper PKD: Parallel Blade Damper						00: Without Coating EL: Satin Anodized RAL----: Powder Coating