

**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 colour as standard
- Satin aluminum anodized
- Other colours on request

INSTALLATION:

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

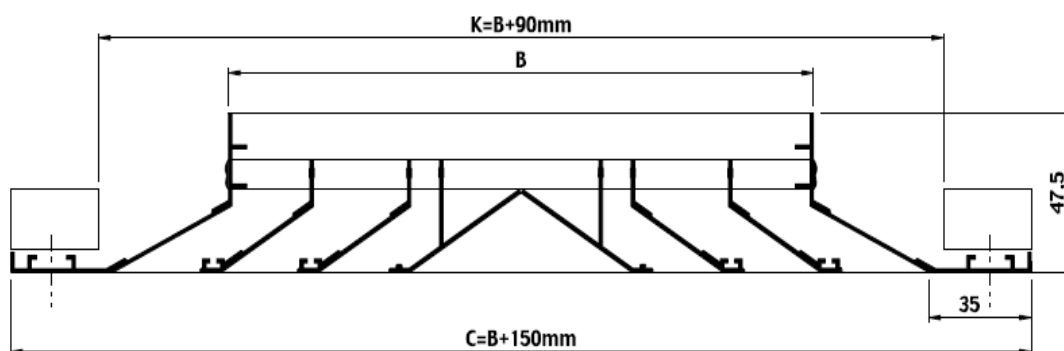
ACCESSORIES:

- PKD: Parallel blade damper, ZKD: Opposite blade damper
- PK: Plenum Box, KS: Mounting Frame
- 1,2,3 way models available



STANDARD SIZES:

Metric System (mm):



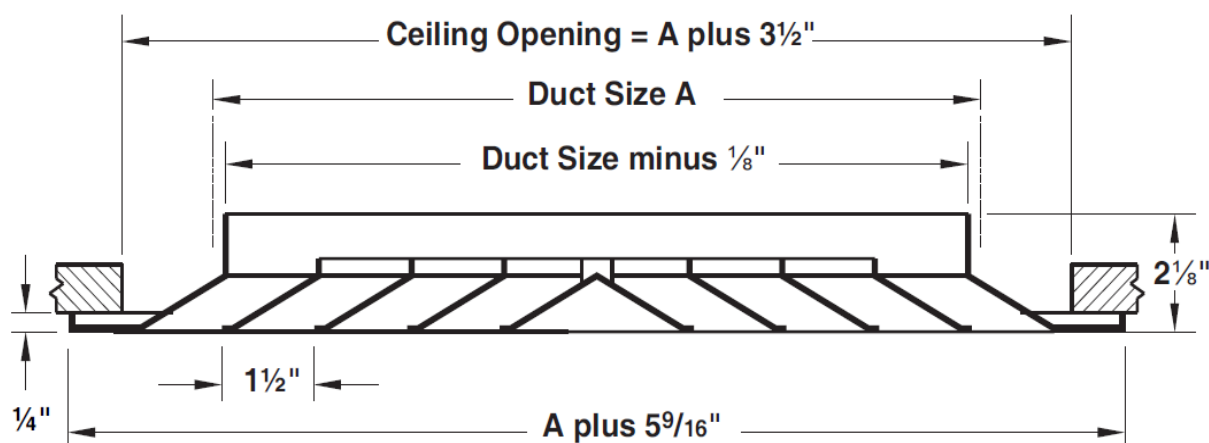
B : 150 - 225 - 300 - 375 - 445* - 450 - 525 - 600 mm

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):



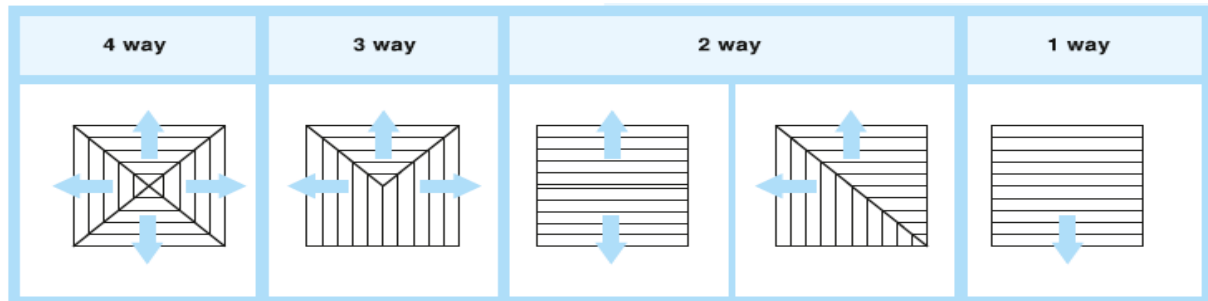
Duct Size A

* 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"

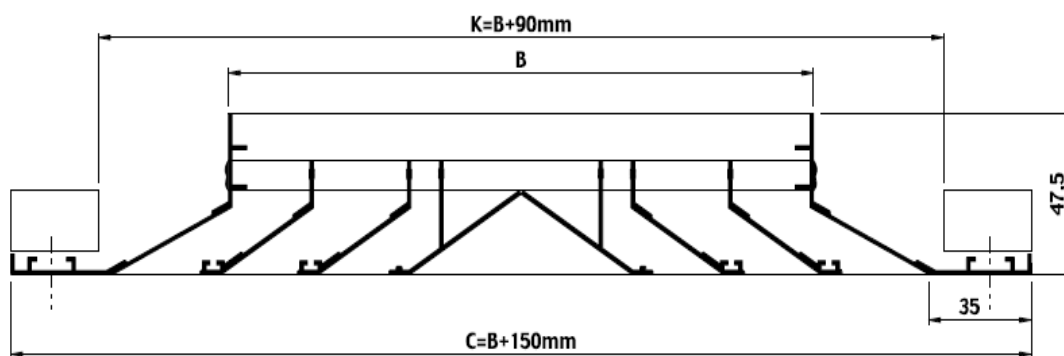


THROW DIRECTIONS:



TECHNICAL DRAWINGS:

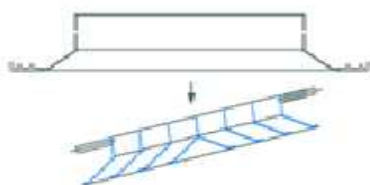
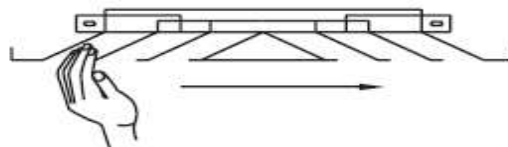
SQUARE CEILING DIFFUSER WITH REMOVABLE AND FIXED CORE



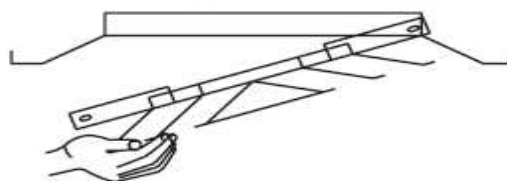
REMOVING CENTER CORE



1 - Push core sideways against spring

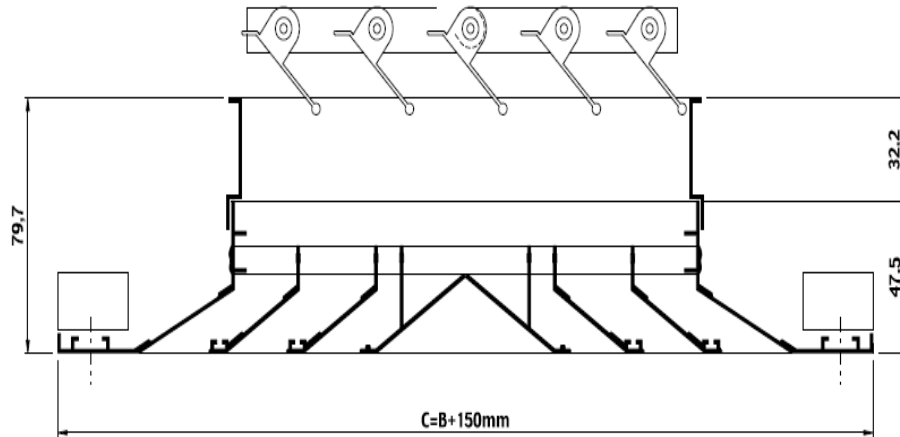


2- Push core sideways against spring

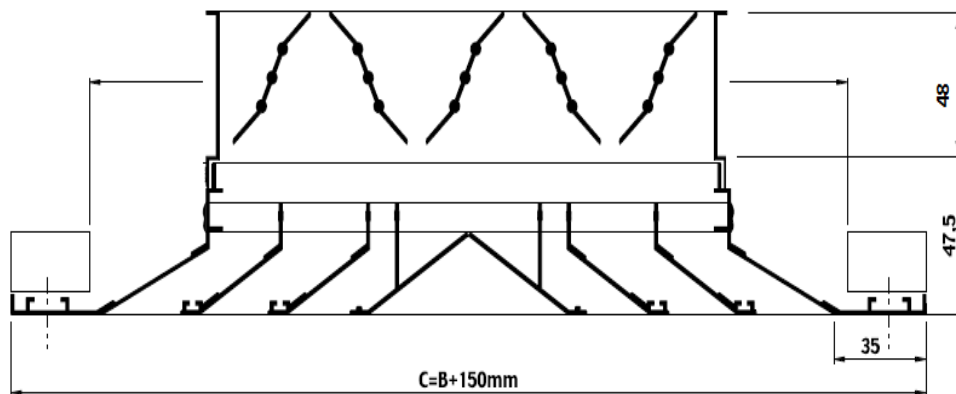




SQUARE CEILING DIFFUSER WITH PARALLEL BLADE DAMPER (KTA - PKD)



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



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 m2	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	m³/h	78,48	m³/h	98,10	m³/h	117,72	m³/h	156,96	m³/h	196,20	m³/h	235,44	m³/h
225x225	0,0244	131,76	m³/h	175,68	m³/h	219,60	m³/h	263,52	m³/h	351,36	m³/h	439,20	m³/h	527,04	m³/h
300x300	0,0435	234,90	m³/h	313,20	m³/h	391,50	m³/h	469,80	m³/h	626,40	m³/h	783,00	m³/h	939,60	m³/h
375x375	0,0679	366,66	m³/h	488,88	m³/h	611,10	m³/h	733,32	m³/h	977,76	m³/h	1222,20	m³/h	1466,64	m³/h
450x450	0,0978	528,12	m³/h	704,16	m³/h	880,20	m³/h	1056,24	m³/h	1408,32	m³/h	1760,40	m³/h	2112,48	m³/h
525x525	0,1331	718,74	m³/h	958,32	m³/h	1197,90	m³/h	1437,48	m³/h	1916,64	m³/h	2395,80	m³/h	2874,96	m³/h
600x600	0,1739	939,06	m³/h	1252,08	m³/h	1565,10	m³/h	1878,12	m³/h	2504,16	m³/h	3130,20	m³/h	3756,24	m³/h

Flow Rate m³/h

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)		
					Cooling 20 F	Heating, ΔT	
	H	V	H	V		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

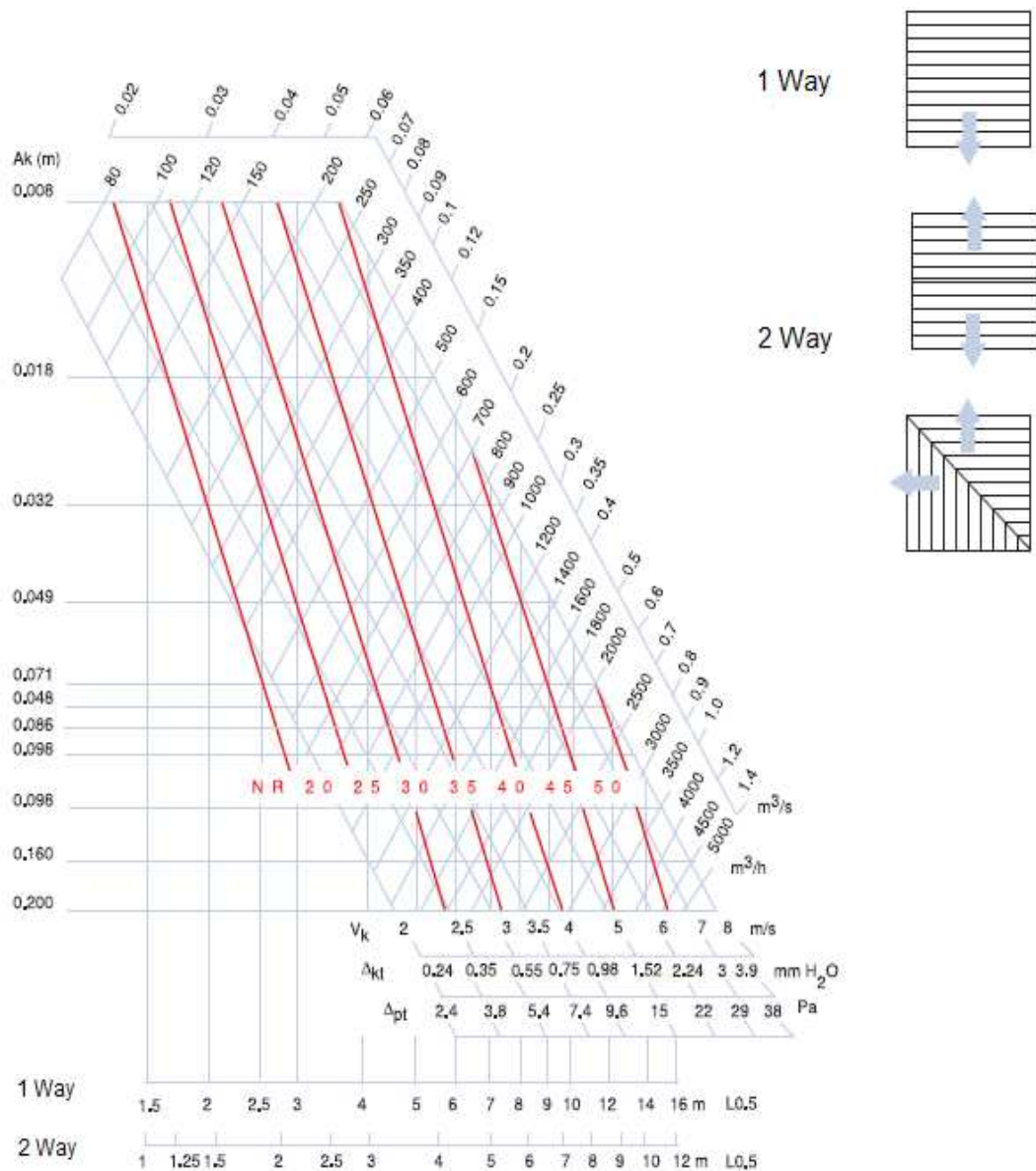


Diagram-1



3 and 4 Way Selection

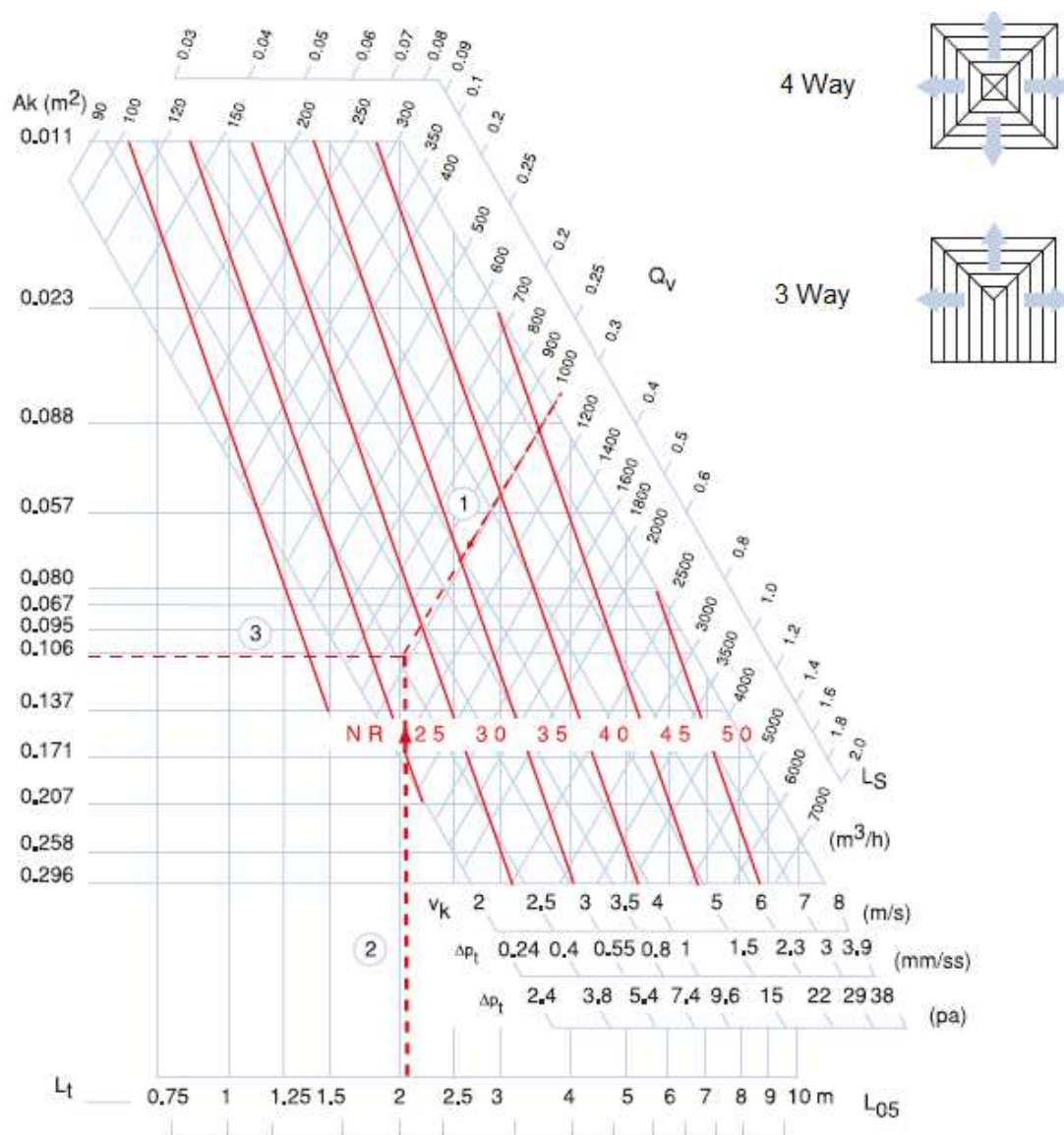


Diagram-2

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

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

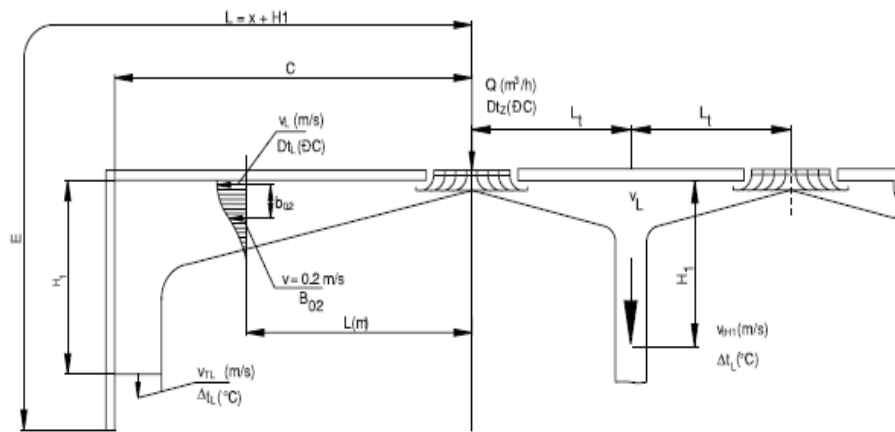


Diagram-3

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

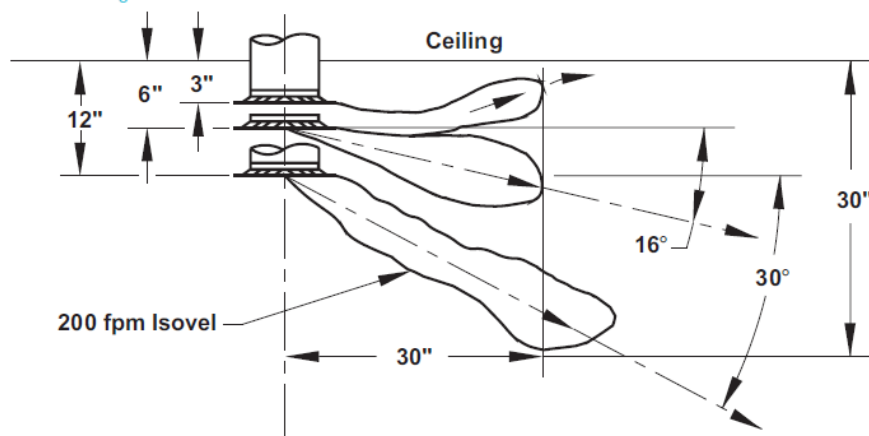


Diagram-4



IMPERIAL PERFORMANCE DATA

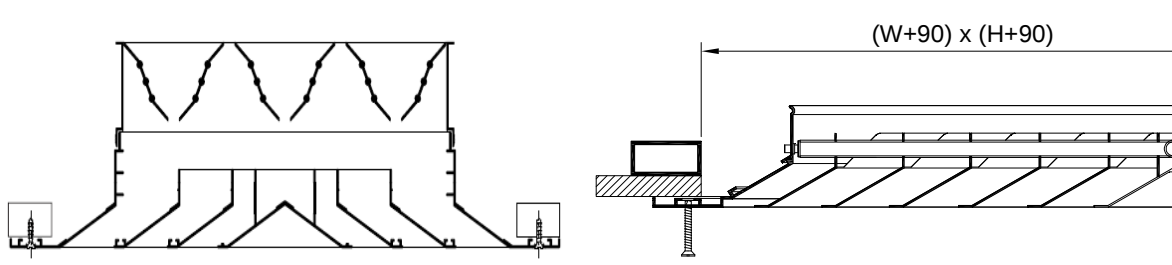
		Neck Vel. Vel. Pressure Total Pressure	300 0.006 0.042	400 0.010 0.075	500 0.016 0.117	600 0.022 0.169	700 0.031 0.229	800 0.040 0.300	900 0.050 0.379							
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	75 - cfm Throw	100 13 cfm Throw	125 16 cfm Throw	150 23 cfm Throw	175 27 cfm Throw	200 31 cfm Throw	225 34 cfm Throw							
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	13-16-23	225	14-17-24
	S2&G2	X & Y	38	4-6-10	50	5-8-12	63	6-10-14	75	8-10-16	88	9-11-18	100	10-12-17	113	10-13-18
	A3	X	28	4-6-8	38	5-7-11	47	8-9-12	58	7-9-13	68	8-10-14	75	9-11-16	84	8-11-18
	A4	Y	19	3-5-8	25	4-7-9	31	8-7-10	38	7-8-11	44	7-9-12	50	8-9-13	58	8-10-14
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	169 - cfm Throw	225 15 cfm Throw	281 21 cfm Throw	338 26 cfm Throw	394 30 cfm Throw	450 34 cfm Throw	506 37 cfm Throw							
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	21-26-36
	S2&G2	X & Y	84	8-9-16	113	8-11-18	141	10-14-20	169	11-18-22	197	13-17-24	225	15-18-26	253	16-18-27
	A3	X	83	8-10-14	84	8-11-18	105	10-13-18	127	11-14-20	148	12-15-21	169	13-16-23	190	14-17-24
	A4	Y	42	4-7-12	58	7-10-14	70	8-11-18	84	10-12-17	98	11-13-18	113	11-14-20	127	12-15-21
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	300 - cfm Throw	400 17 cfm Throw	500 23 cfm Throw	600 28 cfm Throw	700 32 cfm Throw	800 35 cfm Throw	900 38 cfm Throw							
12 x 12 1.00 ft²	S1	X	300	15-20-28	400	18-23-32	500	21-25-38	600	23-28-38	700	25-30-43	800	28-32-46	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	21-26-36
	A3	X	113	11-13-18	150	12-15-21	188	14-17-24	225	15-18-26	263	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	13-16-23	175	14-17-25	200	15-18-26	225	16-20-28
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	469 11 cfm Throw	625 19 cfm Throw	781 25 cfm Throw	938 29 cfm Throw	1094 33 cfm Throw	1250 37 cfm Throw	1406 40 cfm Throw							
15 x 15 1.56 ft²	S1	X	469	19-25-35	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	18-26-37	547	22-28-40	625	25-30-43	703	28-32-45
	A3	X	178	13-18-23	234	15-19-27	289	17-21-30	352	18-23-33	410	20-25-35	468	22-27-36	527	23-28-40
	A4	Y	117	7-12-20	158	11-16-23	195	14-18-28	234	16-20-28	273	18-22-31	313	19-23-33	352	20-25-35
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	675 12 cfm Throw	900 20 cfm Throw	1125 26 cfm Throw	1350 31 cfm Throw	1575 35 cfm Throw	1800 38 cfm Throw	2025 41 cfm Throw							
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	37-45-64	1800	39-48-68	2025	42-51-73
	S2&G2	X & Y	338	11-17-31	450	15-23-38	563	19-28-41	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	23-28-38	591	24-30-42	675	28-32-45	759	28-34-48
	A4	Y	189	9-15-24	225	13-20-28	281	17-22-31	338	20-24-34	394	21-26-37	450	23-28-39	506	24-30-42
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	919 13 cfm Throw	1225 21 cfm Throw	1531 27 cfm Throw	1838 32 cfm Throw	2144 36 cfm Throw	2450 39 cfm Throw	2756 42 cfm Throw							
21 x 21 3.06 ft²	S1	X	919	27-35-48	1225	33-40-58	1531	38-45-63	1838	40-48-69	2144	43-53-75	2450	46-58-80	2756	49-60-85
	S2&G2	X & Y	459	13-20-37	613	18-27-42	766	22-33-47	919	27-37-52	1072	31-40-58	1225	35-42-60	1378	37-45-63
	A3	X	345	19-23-32	459	22-28-37	574	24-30-42	689	28-32-48	804	29-35-49	919	31-37-53	1034	32-40-58
	A4	Y	230	10-17-28	308	18-23-32	383	19-26-38	459	23-28-40	538	25-30-43	613	27-32-48	689	28-34-48
Return Factors -SP = 1.1 TP NC + 1		Total cfm NC Side	1200 14 cfm Throw	1600 22 cfm Throw	2000 28 cfm Throw	2400 32 cfm Throw	2800 36 cfm Throw	3200 40 cfm Throw	3600 43 cfm Throw							
24 x 24 4.00 ft²	S1	X	1200	31-39-58	1600	37-48-64	2000	42-51-72	2400	46-58-79	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	30-42-58	1400	35-45-64	1600	39-48-68	1800	42-51-72
	A3	X	450	21-29-37	600	25-30-43	750	28-34-48	900	30-37-52	1050	33-40-58	1200	35-43-60	1350	37-45-84
	A4	Y	300	12-20-32	400	18-26-37	500	22-29-41	600	28-32-45	700	28-35-49	800	30-37-52	900	32-38-58

Table-7

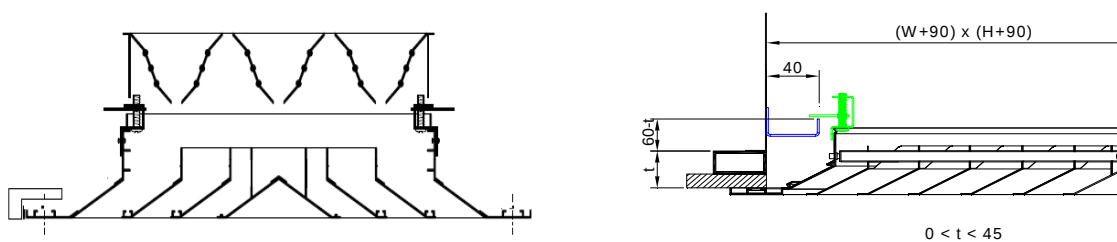


MOUNTING DETAILS

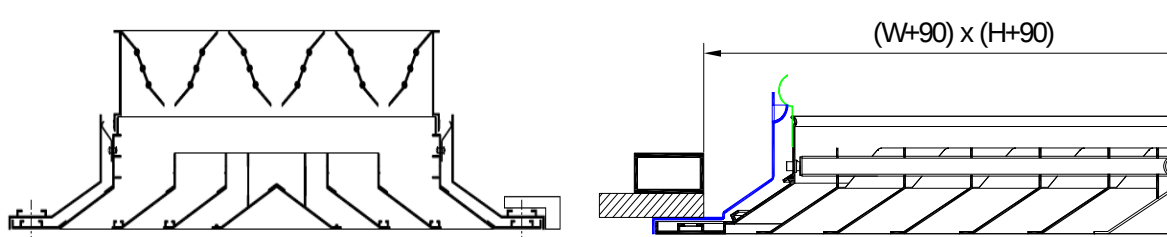
Screw Mounting Details



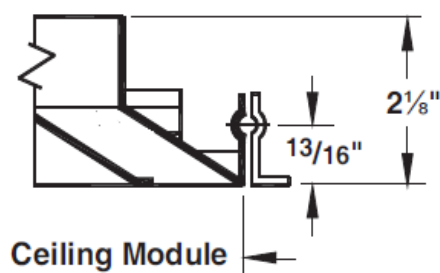
Clips Mounting Details



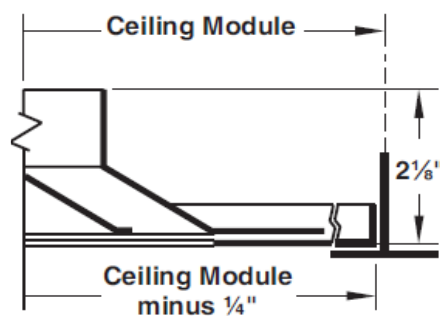
Spring Mounting Details



Snap-in

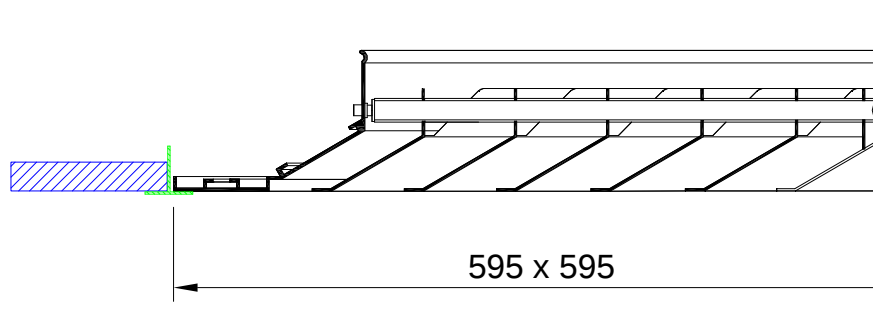


Lay-in

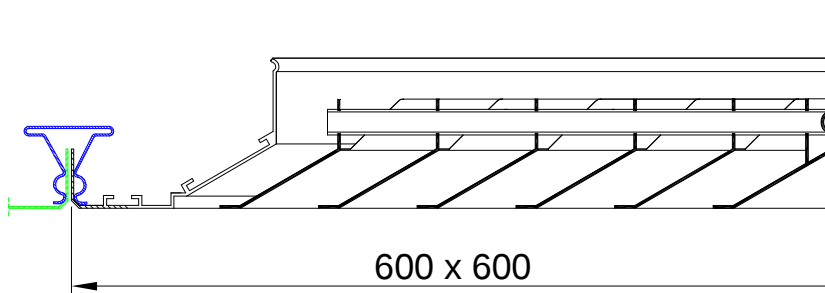




Karolaj Ceiling Mounting Details

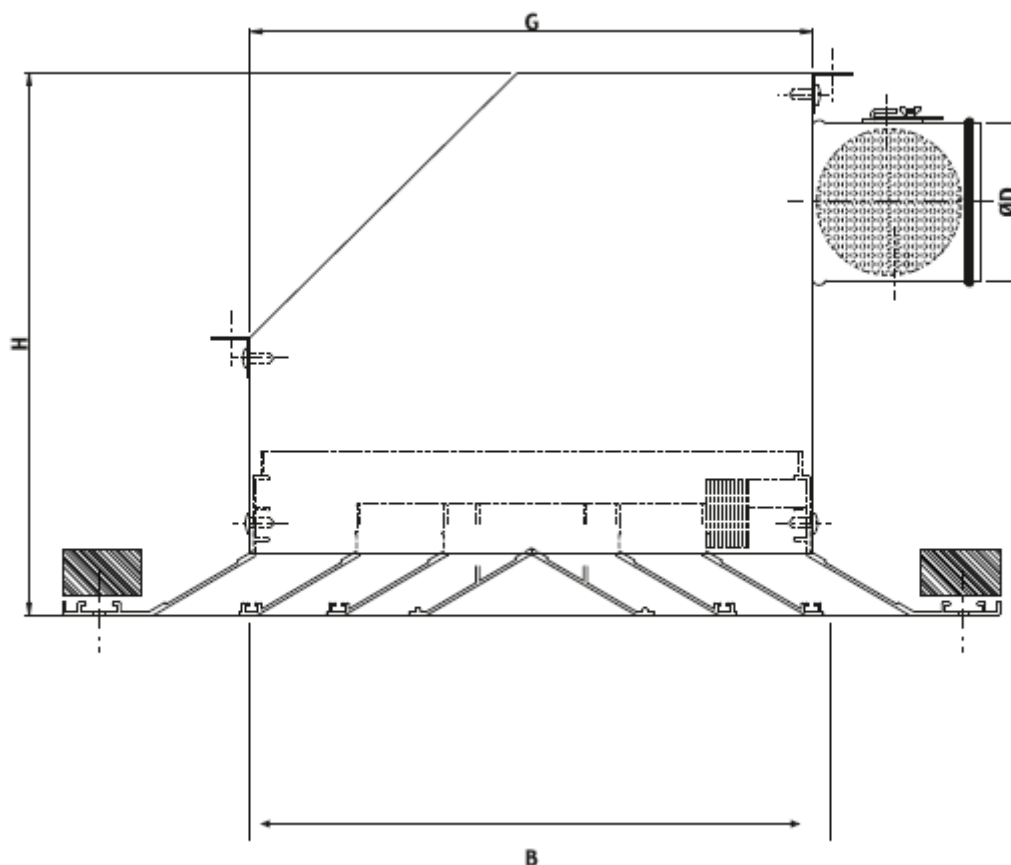


Clipin Ceiling Mounting Details





PLENUM BOX MOUNTING DETAILS

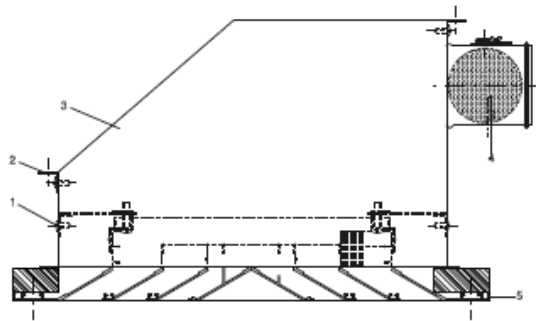


PLENUM BOX DIMENSION

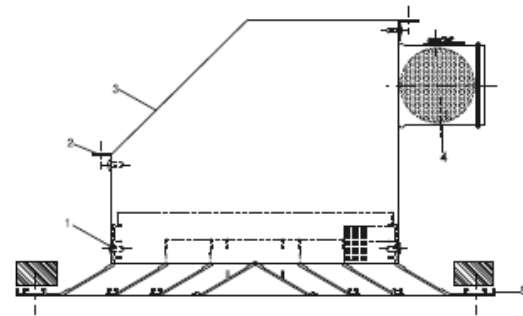
B	150	225	300	375	445	450	485	525	600
D	100	150	200	250	250	250	250	300	300
H	250	300	400	450	450	450	450	500	500
G	153	228	303	378	448	543	488	525	603



CEILING MOUNTING DETAILS

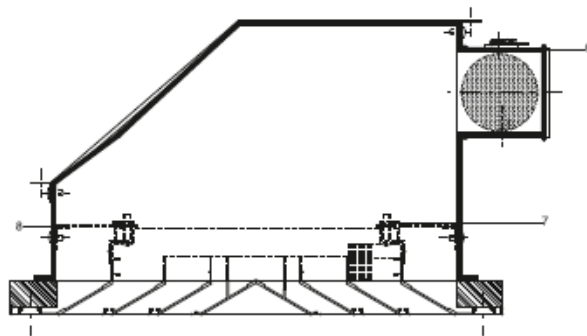


CLIPS MOUNTING (without insulation)

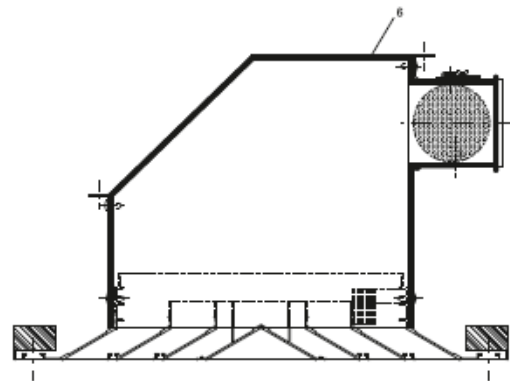


SCREW MOUNTING (without insulation)

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



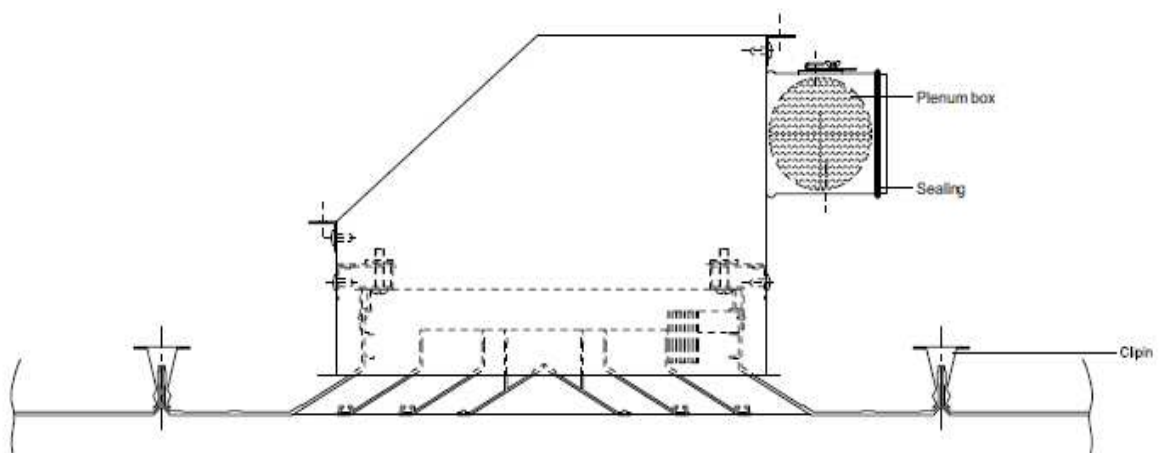
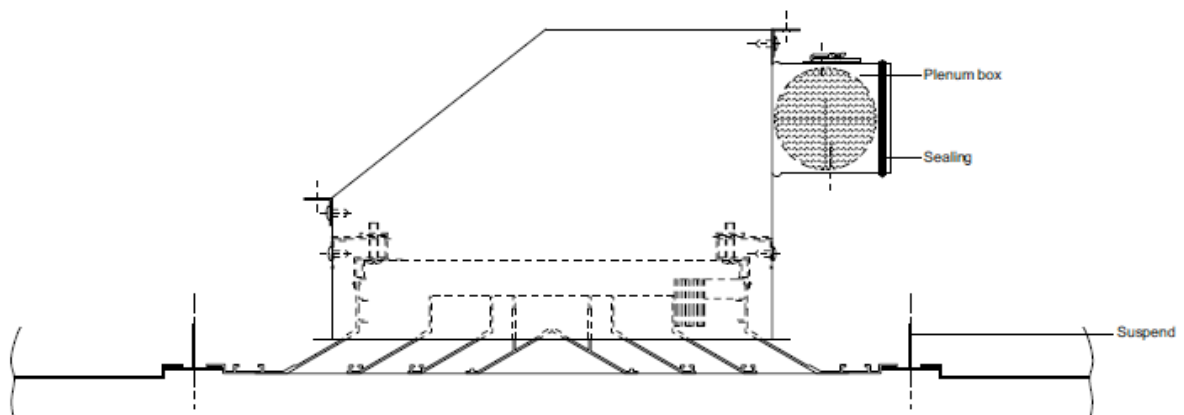
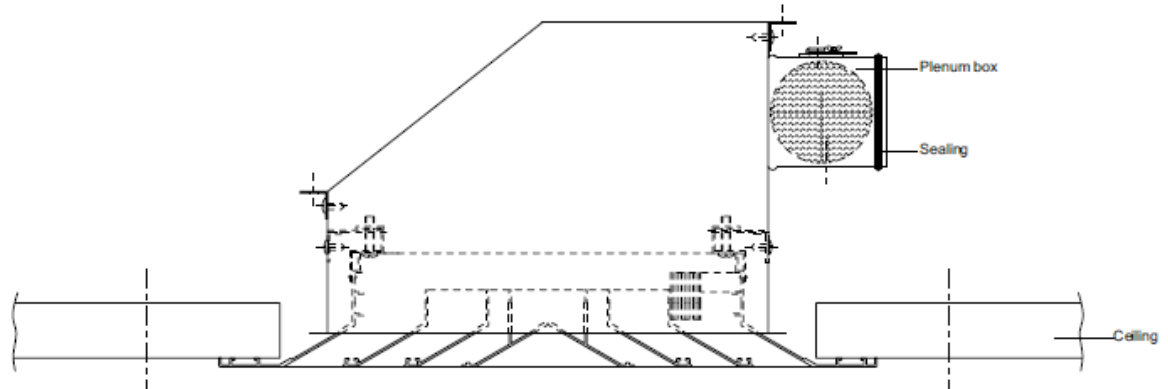
CLIPS MOUNTING (with insulation)



SCREW MOUNTING (with insulation)



SPECIAL CEILING MOUNTING DETAILS





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