

MODEL PSD-10 PLENUM LINEAR SLOT DIFFUSERS

APPLICATION



KBE Model PSD10 is available to architects and engineers who require design and construction superior to the industry standard. For instance, the air pattern controller allows for 180° adjustment of the discharge direction as well as volume control, from the face of the diffuser. The smooth aerodynamic curvature of the adjustable pattern controller produces a tight ceiling-hugging horizontal patterns even at low pressure

FEATURED STANDARD CONSTRUCTION

•**Slot Diffuser:**

- Constructed from extruded aluminum pattern controls

•**Plenum Box:**

-Constructed from 24Ga galvanized steel

•**Blades:**

-The fully adjustable deflection blades allow for air pattern to be controlled along the ceiling , straight down or at the same intermediate setting.

- The deflection blades are designed so that when in closed position, the air pressure tends to form a tight seal.

•**Slots:**

-Spacing: S=3/4" or S=1"

- Number: 1,2,3 or 4 Slots

Finish:

- Plenum Box: Mill finish

- Slot Diffuser: RAL9010

• **Standard Length Sizes:**

- 20", 24", 40" , 48" , 80".

• **Standard Number of Inlets:**

- 1 inlet per 1 meter

• **Standard Inlet Sizes:**

- 6", 8", 10" and 12

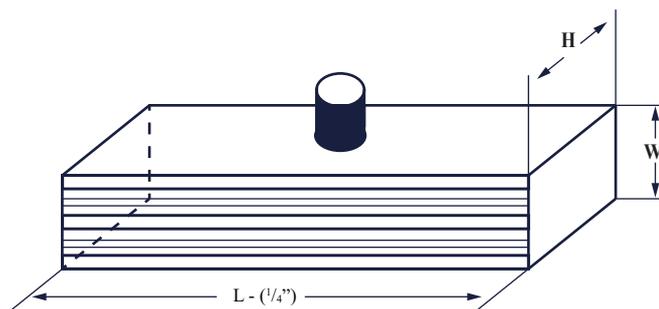
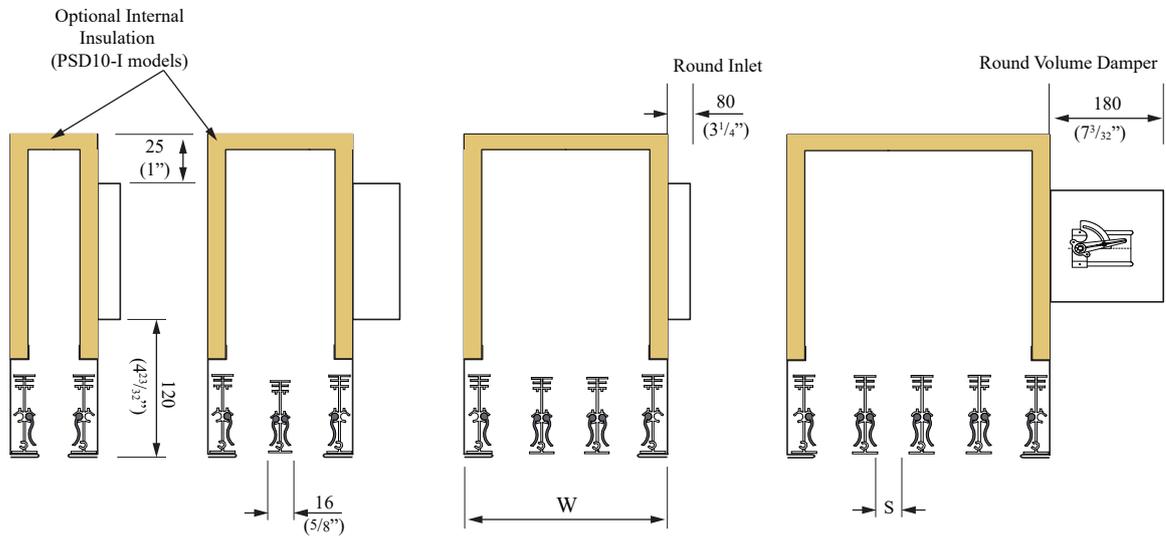
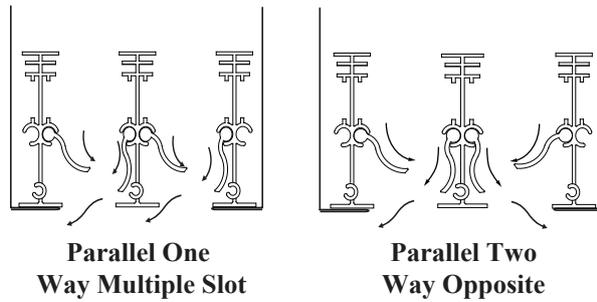
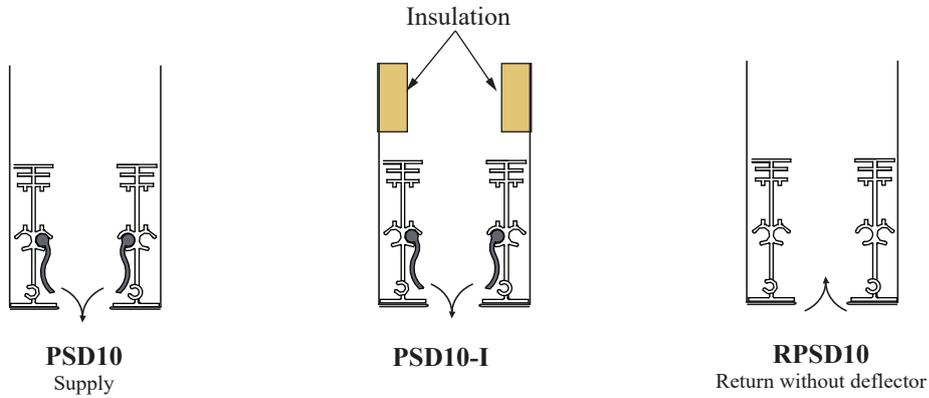
N.B: - The available lengths of 12" inlet size are 40" and 48"

OPTIONS

- With 15 mm clean liner insulation
- Plenum Mounting Bracket
- Any RAL color upon request
- Non standard module length
- Multiple number of inlets
- With shipped loose Round Volume Control Damper

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ILLUSTRATION



	W mm				Standard Inlet Size	Dimensions H mm
	Number of Slots					
S = 3/4"	56	92	128	164	6":	295
S = 1"	61	102	143	184	8":	345
					10":	395
					12":	445



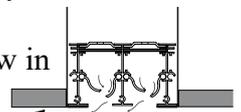
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PERFORMANCE DATA MODEL PSD10-34 & MODEL PSD10-34-I

3/4" Spacing	Free Area Velocity (Fpm)		500	600	700	800	1000	1200	1400	1600	1800	2000	
		AK Factor											
10"	1Slot	0.076 ft2	Cfm	38	46	53	61	76	91	106	122	137	152
			SP	0.009	0.014	0.018	0.024	0.037	0.053	0.072	0.095	0.12	0.148
			NC	<15	<15	<15	<15	16	20	24	27	30	33
			Throw	4,2,2	6,4,2	9,5,3	11,7,4	15,9,6	18,12,7	21,14,9	24,16,11	26,19,13	29,21,15
	2Slots	0.164 ft2	Cfm	82	98	115	131	164	197	230	262	295	328
			SP	0.012	0.017	0.023	0.029	0.046	0.065	0.088	0.114	0.143	0.176
			NC	<15	<15	<15	<15	20	25	29	32	36	39
			Throw	12,4,3	14,6,4	17,8,6	19,10,7	23,14,10	26,17,13	29,20,15	31,22,18	32,24,20	33,26,22
	3Slots	0.224 ft2	Cfm	112	134	156	179	224	268	313	358	402	447
			SP	0.012	0.017	0.023	0.031	0.049	0.071	0.097	0.127	0.162	0.202
			NC	<15	<15	<15	17	23	28	33	36	39	42
			Throw	13,5,3	16,7,5	19,9,6	21,11,8	26,15,11	30,19,14	33,22,17	35,24,20	37,27,23	38,29,26
	4Slots	0.283 ft2	Cfm	142	170	198	226	283	340	396	453	509	566
			SP	0.011	0.016	0.022	0.03	0.049	0.073	0.103	0.139	0.18	0.227
			NC	<15	16	19	23	28	33	37	40	43	46
			Throw	13,4,3	16,7,4	19,9,6	22,11,7	27,16,10	31,19,13	36,23,16	39,26,20	42,28,24	45,31,28

NOTES:

- 1- Performance Data is Based on ASHREA 70-06 based on Horizontal Throw "Method of Testing For Rating the Performance of Air Outlets and Inlets".
- 2- AIRFLOW: based on CFM **per 1200mm (48") of diffuser length**
- 3- AK factor: Free area factor for **1200mm (48") of diffuser length**
- 3- CFM: Standard air density and ISOTHERMAL conditions.
- 4- Static pressure (SP): Inches of Water Gauge
- 5- Free area Velocity: Face discharge velocity in feet per minute (fpm) with blades set for Horizontal Throw
- 6- Noise Criteria: NC Level is based on room attenuaion of 10db (sound power level Re:10-12Watts)
- 7- Throw: Projection distance in FEET from diffuser discharge at which the maximum velocity has been reduced to specified terminal velocity (Vt). Data show are for 50,100,150 Terminal velocity (fpm) for Horizontal Throw
- 8- Horizontal Throw: tested as diffuser installed in Ceiling, with blades set for Horizontal Throw in the room (as Shown)
- 9- For Vertical Throw multiply Sp x 0.5 and deduct 15db from NC.



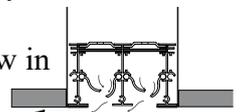
MODEL PSD-10 PLENUM LINEAR SLOT DIFFUSERS

PERFORMANCE DATA MODEL PSD10-10 & MODEL PSD10-10-I

1" Spacing	Free Area Velocity (Fpm)	500	600	700	800	1000	1200	1400	1600	1800	2000		
	AK Factor												
10"	1Slot	0.097 ft2	Cfm	49	58	68	78	97	116	136	155	175	194
			SP	0.018	0.025	0.034	0.043	0.065	0.091	0.121	0.154	0.191	0.232
			NC	<15	<15	15	18	23	27	31	34	37	39
		Throw	6,5,<2	11,7,3	14,9,4	18,10,5	23,14,8	27,16,10	29,18,12	29,20,14	28,21,15	25,22,17	
	2Slots	0.171 ft2	Cfm	86	103	120	137	171	205	239	274	308	342
			SP	0.018	0.025	0.033	0.042	0.064	0.089	0.118	0.151	0.187	0.227
			NC	<15	<15	<15	17	23	28	32	36	39	42
		Throw	17,8,3	20,10,5	22,13,6	24,14,8	27,18,11	30,21,14	31,23,17	32,25,19	32,27,21	31,28,23	
	3Slots	0.271 ft2	Cfm	135	163	190	217	271	325	379	434	488	542
			SP	0.018	0.024	0.032	0.041	0.062	0.086	0.114	0.146	0.181	0.219
			NC	<15	<15	<15	17	23	29	33	37	41	44
		Throw	24,11,5	26,14,7	27,16,9	28,18,11	30,22,15	32,26,18	34,28,21	35,30,23	36,32,25	36,32,27	
	4Slots	0.37 ft2	Cfm	185	222	259	296	370	444	518	592	666	740
			SP	0.017	0.024	0.032	0.041	0.061	0.084	0.111	0.141	0.174	0.21
			NC	<15	<15	<15	17	24	29	34	38	41	44
		Throw	21,12,7	24,15,9	26,18,11	28,20,13	31,25,17	34,29,20	36,31,22	37,33,24	37,34,25	37,34,25	

NOTES:

- 1- Performance Data is Based on ASHREA 70-06 based on Horizontal Throw "Method of Testing For Rating the Performance of Air Outlets and Inlets".
- 2- AIRFLOW: based on CFM **per 1200mm (48") of diffuser length**
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- 8- Horizontal Throw: tested as diffuser installed in Ceiling, with blades set for Horizontal Throw in the room (as Shown)
- 9- For Vertical Throw multiply Sp x 0.5 and deduct 15db from NC.





MODEL PSD-10 PLENUM LINEAR SLOT DIFFUSER

ORDERING INFORMATION

MODEL	No. of Slots	Spacing	Insulation	Plenum Mounting Bracket	No. of Inlets	Finishing	Standard Inlet Sizes	Standard Length Sizes
PSD10	1	34	--	--	--	RAL 9010	--	--
	1: One Slot 2: Two Slots 3: Three Slots 4: Four Slots	34: 3/4" 10: 1"	-- : Standard I : Insulation	--: Standard B: Plenum Mounting Bracket	--: 1 inlet per 1 meter 1: 1 inlet 2: 2 inlets 3: 3 inlets 4: 4 inlets 5: 5 inlets 6: 6 inlets	--: Brut RAL 9010: (std) RAL"num":Other Ral color	6 8 10 12	20 24 40 48
PSD10: Supply RPSD10: Return without Deflector								

N.B:

- The available lengths of 12" inlet size are 40" and 48"
- Insulation is not applicable for models RPSD10
- For more information, please check the submittal sheet
- Plenum Linear Slot Diffusers with length that exceed 80" (200 cm) are manufactured as multiple section and field assembled by others. Also, drawings should be agreed on with our engineers
- For Round Volume Control Damper, Please refer to " KAC " submittal sheet and order information. The damper will be shipped loose.