



# Ceiling Mounted Square Plaque Diffuser

Model : WBD-SPD

*Make the Change - shape the future*

## INTRODUCTION

The WB-SPD range-For that *radial horizontal air pattern*  
 The WB-SPD square plaque diffuser answers to both *architectural* appeal and *engineering* performance criteria.  
 It's clean crisp and unobstructive face design is intended to blend with most ceiling system, giving it that ultra modern look !

Engineering wise, the aerodynamically designed back cone combines with the face panel to deliver a tight 360 degree radial horizontal air pattern.  
 It maintains a true 360 degree horizontal pattern even at low air volumes, making it perfect for VAV applications.

The face panel swings down by pushing two spring catches, no special tools required.  
 So versatile you can even throw in a pneumatic actuator-for those who desires the intelligent building concept.

## CONSTRUCTION

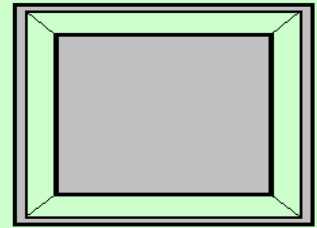
Constructed of steel or aluminum and finished with epoxy polyester powder coats, these diffusers come with different frame design to match various ceiling designs.

Comes standard in 2 sizes -600x600 & 300x300 with different collar sizes for different air volumes.

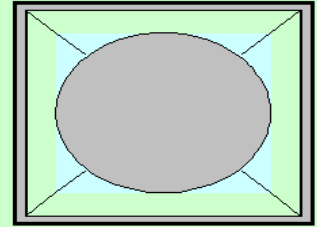
## OPTIONS

Two basic face - Square (SPD-S) and Circular (SPD-C) comes standard with fan damper. To indicate flange type; -Standard, Snap in or Splines

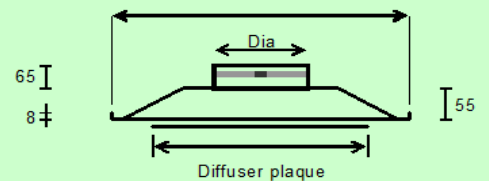
- Model with Plenum box                   SPD-S-PB
- Model with Pneumatic actuator       SPD-S-PA
- Model for return application          SPD-S-RA



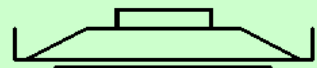
Square faced model WBD-SPD-S



Circular faced model WBD-SPD-C



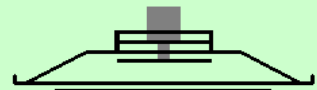
Standard construction c/w fan damper



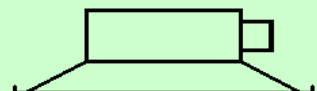
Snap in flanges



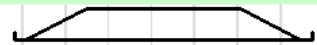
Spline type flanges



Pneumatic actuated damper



Construction with Plenum Box



Return / Dummy construction

## PERFORMANCE DATA

Neck Velocity		2	2.5	3	3.5	4	4.5	5	6	7	8
600x 600 neck 150 dia	P/D	2.49	3.98	5.72	7.96	10.20	13.19	16.17	23.14	31.60	41.31
	CMH	132.522	166.502	200.482	232.763	266.743	299.024	333.004	399.265	465.526	533.486
	NC						19	22	29	34	38
	T	0   1   1	0   1   1	1   1   2	1   1   2	1   1   2	1   1   2	1   1   2	1   1   2	1   2   2	1   2   3
600x 600 neck 200 dia	P/D	4.48	7.22	10.45	14.18	18.41	23.14	28.62	41.31	56.24	73.41
	CMH	237.86	297.325	355.091	414.556	474.021	533.486	592.951	711.881	830.811	948.042
	NC						19	23	27	33	38
	T	1   1   2	1   1   2	1   1   2	1   1   2	1   2   3	1   2   3	1   2   3	1   2   3	2   2   3	2   2   4
600x 600 neck 250 dia	P/D	7.22	11.20	16.17	21.90	28.62	36.33	44.79	64.45	87.84	114.72
	CMH	370.382	463.827	555.573	649.018	740.764	834.209	925.955	1111.146	1296.337	1430.558
	NC				18	22	26	30	36	41	46
	T	1   1   2	1   1   2	1   2   3	1   2   3	1   2   3	2   2   4	2   2   4	2   2   4	2   3   4	2   3   4
600x 600 neck 300 dia	P/D	10.20	16.17	23.14	31.60	41.31	52.26	64.45	92.82	126.41	165.23
	CMH	533.486	667.707	800.229	934.45	1066.972	1201.193	1333.715	1600.458	1867.201	2133.944
	NC			15	21	25	29	33	39	44	49
	T	1   1   2	1   2   3	1   2   3	2   2   4	2   2   4	2   3   4	2   3   4	2   3   5	2   3   5	3   4   5

**Performance notes** All pressures in Pa. All T are throw sin meters for radius of diffusion with terminal velocities of 0.75, 0.5 & 0.25m/s  
 Throws are based on supply air and room air at isothermal conditions. For exposed duct without ceiling T=Tx0.7. NC values are based on a room absorption of 10dB re 10<sup>-12</sup> watts and one diffuser. Units are tested in accordance to ADC Test Code 1062:GRD-84