

PERFORATED DIFFUSERS



MODEL PSI & PRI with Fiberglass Plenum

MODEL PSI - Supply Diffuser

PSI Supply Diffusers have high diffusion induction rates resulting in rapid temperature and velocity equalization of the mixed air mass well above the zone of occupancy.

The horizontal performance of their air pattern baffle or optional directional louvers ensure confident use of cooling differentials of 25° F and greater, at predicted low air motion 35 fpm in the zone of occupancy.

PSI Supply Diffusers perform efficiently with air loadings of 1 to 3 cfm per square feet of floor area, or 6 to 20 air changes per hour (based on 10 ft. ceiling height) and sound level range of NC 25 to 35.



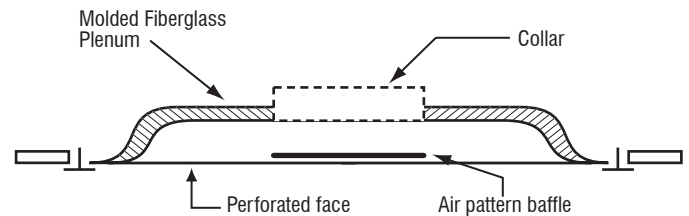
PSI
PRI

MODEL PRI - Return Diffusers

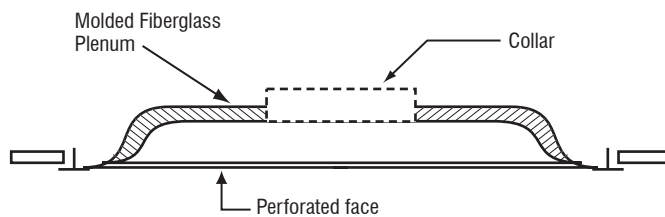
PRI Return Diffusers are similar to PSI but with the air pattern baffle removed. They are matched in appearance.

FEATURES

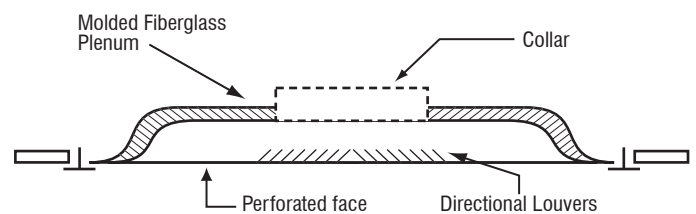
- Heavy gauge all steel construction.
- 24" X 24" face for neck sizes 6"-8"-10"-12"-14" D.
- Compatible with VAV Systems.
- Powder paint coating - White.
- Holes are $\frac{3}{16}$ " D. staggered $\frac{1}{4}$ " affording 53% free area.



**Model PSI Standard
(with Air Pattern Baffle)**



Model PRI Standard (with Baffle removed)



**Model PSI-L Optional
(with Directional Louvers - add Suffix-L)**

HOW TO ORDER

PS - PERF. SUPPLY
PR - PERF. RETURN

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OPTIONAL DIR. LOUVERS
(only with PSI)

ENGINEERING PERFORMANCE DATA



MODEL PSI - Supply Diffusers

24" x 24" face

SIZE	Neck Velocity (fpm)	400	500	600	700	800	1000	1200	1400
	Velocity Pressure (in H ₂ O)	.010	.016	.022	.031	.041	.062	.090	.122
6	CFM	78	98	118	137	157	196	235	274
	Total Pressure	.017	.027	.038	.053	.069	.109	.159	.215
	NC	< 20	< 20	< 20	21	27	32	37	41
	Throw (ft)	1-2-3	1-2-4	2-3-5	2-3-6	2-4-7	3-5-8	4-6-9	5-7-10
8	CFM	140	175	209	244	279	349	419	489
	Total Pressure	.018	.028	.040	.054	.071	.109	.160	.216
	NC	< 20	< 20	< 20	24	27	33	37	42
	Throw (ft)	1-3-5	2-3-6	2-4-7	3-5-8	4-6-10	5-8-12	6-9-14	7-10-15
10	CFM	218	273	327	382	436	545	654	763
	Total Pressure	.018	.026	.039	.054	.071	.109	.160	.216
	NC	< 20	< 20	< 20	23	28	36	41	47
	Throw (ft)	2-4-6	3-4-7	3-5-8	4-7-10	5-8-12	5-9-14	6-11-16	7-13-18
12	CFM	314	393	471	550	628	785	941	1099
	Total Pressure	.019	.029	.041	.057	.072	.111	.163	.218
	NC	< 20	< 20	20	25	30	39	43	49
	Throw (ft)	2-5-7	3-5-8	3-7-10	4-8-12	5-9-14	7-11-16	8-12-18	10-14-21
14	CFM	492	615	738	861	984	1230	1476	1722
	Total Pressure	.021	.032	.043	.075	.092	.141	.193	.261
	NC	< 20	< 20	21	26	34	40	45	50
	Throw (ft)	3-6-9	4-7-10	4-8-12	5-9-13	6-10-15	8-12-18	10-14-21	12-17-24

NC Value based on 10 db room attenuation.

Throw Values are based on isothermal air and thermal velocities of 150 fpm, 100 fpm & 75 fpm respectively.
Total Pressure the sum of static pressure plus velocity pressure and is given in inches w.g.

MODEL PRI - Return Diffusers

24" x 24" face

SIZE	Neck Velocity (fpm)	400	500	600	700	800	1000	1200	1400
	Velocity Pressure (in H ₂ O)	0.010	0.015	0.022	0.031	0.040	0.062	0.090	0.122
	Static Pressure (in H ₂ O)	-0.026	-0.042	-0.060	-0.078	-0.104	-0.160	-0.212	-0.290
6	CFM	78	98	118	13	15	196	235	27
	NC	< 20	< 20	< 20	< 20	< 20	20	23	26
8	CFM	140	175	209	244	279	349	419	489
	NC	< 20	< 20	< 20	21	22	24	27	29
10	CFM	218	273	327	382	436	545	654	763
	NC	< 20	< 20	21	23	25	28	30	32
12	CFM	314	393	471	550	628	785	941	1099
	NC	< 20	20	24	26	28	31	34	36
14	CFM	430	534	642	748	858	1072	1286	1500
	NC	22	25	28	30	32	35	37	39
16	CFM	558	698	836	978	1110	1390	1666	1950
	NC	26	28	30	34	37	40	43	46