

PERFORATED RETURN



Rev. 0

ARCHITECTURAL RETURN AIR

High Free Area • Efficient Return Air

PRODUCT MODELS

Steel and aluminum face Construction

PRE – Perforated Return Grille with extruded aluminum frame (drywall ceiling or sidewall).

PRE7 – with steel opposed blade damper.

PRT – Surface or T-bar lay-in perforated return diffuser.

PRN – Lay-in T-bar perforated return diffuser.

Add prefix “A” for aluminum.

The Airvector® Perforated Return Series is a complete line of architectural return air grilles and diffusers designed for efficient, quiet air return in commercial, institutional, and architectural HVAC applications. The series includes **PRE/APRE** framed perforated return grilles, **PRT/APRT** surface and lay-in ceiling return diffusers, and **PRN/APRN** lay-in ceiling return diffusers. Available in both steel and aluminum construction, these models provide versatile mounting solutions while maintaining a clean, modern architectural appearance.

Featuring precision perforated faces with 3/16" diameter holes on 1/4" staggered centers, the series offers high free-area performance of up to 53%, promoting low pressure drop and uniform return airflow. Whether specified for drywall, surface-mounted, or T-bar ceiling applications, the Perforated Return Series provides a versatile solution for a wide range of architectural projects.

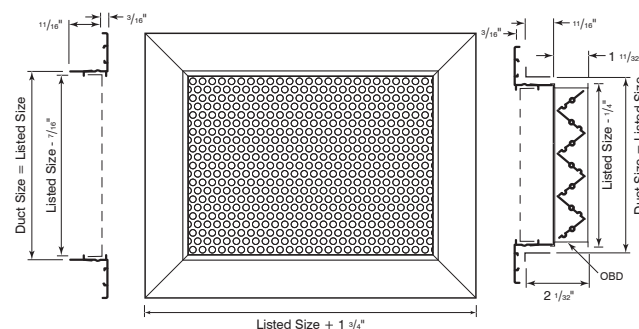
KEY FEATURES

- **High Free Area** – Up to 53% open area.
- **Steel & Aluminum Models** – Construction options available.
- **Architectural Design** – Clean perforated appearance.
- **Flexible Installation** – T-bar, drywall, surface, or sidewall.
- **Low Pressure Drop** – Low pressure drop.
- **Powder-Coated Finish** – White standard; custom colors available.

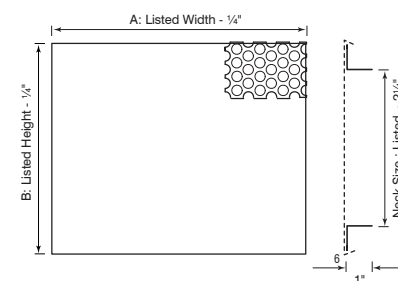


PRE

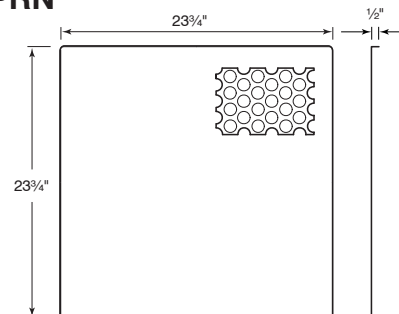
PRE/PRE7 - APRE/APRE7



PRT - APRT



PRN - APRN



Perforated Return Series

PRE, PRT, PRN (steel)

APRT, APRN (aluminum)

Nominal Duct Size (in.)	A _k	Core Area sq. ft	Core Velocity Velocity Pressure Neg. Static Pressure	NC 10				NC 20		NC 30		NC 40
				300 0.010 0.051	400 0.016 0.079	500 0.022 0.114	600 0.031 0.156	700 0.040 0.203	800 0.062 0.318	1000 0.090 0.458	1200 0.122 0.623	1400 0.12 0.62
6x6	0.20	0.19	Airflow, cfm NC	57 -	76 -	95 -	114 -	133 13	152 16	190 21	228 26	266 30
8x6	0.27	0.2	Airflow, cfm NC	78 -	104 -	130 -	156 -	182 14	208 17	260 22	312 27	364 30
10x6	0.33	0.34	Airflow, cfm NC	102 -	136 -	170 -	204 11	238 15	272 18	340 24	408 28	476 32
8x8	0.36	0.37	Airflow, cfm NC	111 -	148 -	185 -	222 12	259 15	296 19	370 24	444 29	518 33
12x6	0.40	0.41	Airflow, cfm NC	123 -	164 -	205 -	246 12	287 16	328 19	410 25	492 29	574 33
12x8	0.53	0.75	Airflow, cfm NC	171 -	228 -	285 -	342 14	399 17	456 21	570 27	684 31	798 34
10x10	0.56	0.59	Airflow, cfm NC	177 -	236 -	295 -	354 14	413 18	472 21	590 26	708 31	826 35
18x6	0.60	0.63	Airflow, cfm NC	189 -	252 -	315 -	378 15	441 18	504 22	630 27	756 31	882 35
12x10	0.67	0.72	Airflow, cfm NC	216 -	288 -	360 -	432 15	504 18	576 22	720 27	864 32	1008 35
12x12	0.80	0.88	Airflow, cfm NC	264 -	352 -	440 11	528 15	616 19	704 23	880 28	1056 31	1232 36
14x14	1.09	1.22	Airflow, cfm NC	366 -	488 -	610 12	732 16	854 21	976 24	1220 29	1464 34	1708 38
18x12	1.20	1.35	Airflow, cfm NC	405 -	540 -	675 12	810 17	945 21	1080 24	1350 30	1620 34	1890 38
24x10	1.33	1.49	Airflow, cfm NC	447 -	596 -	745 12	894 18	1043 22	1192 25	1490 30	1788 35	2086 39
16x16	1.42	1.62	Airflow, cfm NC	486 -	648 -	810 14	972 18	1134 22	1296 25	1620 31	1944 35	2268 39
24x12	1.60	1.82	Airflow, cfm NC	546 -	728 -	910 14	1092 19	1274 22	1456 26	1820 30	2184 36	2548 39
18x18	1.80	2.07	Airflow, cfm NC	621 -	828 -	1035 15	1242 19	1449 23	1656 26	2070 32	2484 36	2898 40
30x12	2	2.29	Airflow, cfm NC	687 -	916 -	1145 15	1374 20	1603 23	1832 27	2290 32	2748 37	3206 40
20x20	2.22	2.57	Airflow, cfm NC	771 -	1028 -	1285 16	1542 20	1799 24	2056 27	2570 33	3084 37	3598 41
22x22	2.69	3.14	Airflow, cfm NC	942 -	1256 11	1570 17	1884 21	2198 25	2512 28	3140 34	3768 38	4396 42
30x18	3	3.5	Airflow, cfm NC	1050 -	1400 12	1750 17	2100 21	2450 25	2800 29	3500 34	4200 38	4900 42
24x24	3.20	3.75	Airflow, cfm NC	1125 -	1500 12	1875 17	2250 22	2625 26	3000 29	3750 34	4500 39	5250 43
36x18	3.60	4.22	Airflow, cfm NC	1266 -	1688 12	2110 18	2532 22	2954 26	3376 29	4220 35	5064 39	5908 43
26x26	3.76	4.47	Airflow, cfm NC	1341 -	1788 12	2235 18	2682 22	3129 26	3576 29	4025 35	4470 39	5364 43
30x24	4	4.71	Airflow, cfm NC	1413 -	1884 13	2355 18	2826 23	3297 27	3768 30	4710 35	5652 40	6594 44

Static pressures are negative, in inches of water,

SYMBOLS

NC Noise Criteria based on room absorption of 10dB

A_k Outlet area in Sq. Feet

Perforated Return Series

PRE, PRT, PRN (steel)

APRT, APRN (aluminum)

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28x28	4.36	5.16	Airflow, cfm NC	1548 -	2064 13	2580 19	3096 22	3612 27	4128 30	5160 36	6192 40	7224 44
36x24	4.8	5.66	Airflow, cfm NC	1698 -	2264 13	2830 19	3396 24	3962 27	4528 31	5660 36	6792 41	7924 44
30x30	5	5.94	Airflow, cfm NC	1782 -	2376 14	2970 19	3564 22	4158 28	4752 31	5940 36	7128 41	8316 45
32x32	5.69	6.78	Airflow, cfm NC	2034 -	2712 14	3390 20	4068 24	4746 28	5424 31	6780 37	8136 41	9492 45
48x24	6.4	7.63	Airflow, cfm NC	2289 -	3052 15	3815 20	4578 25	5341 29	6104 32	7630 38	9156 42	10682 46
36x36	7.4	8.63	Airflow, cfm NC	2589 -	3452 15	4315 22	5178 25	6041 29	6904 32	8630 38	10356 42	12082 46
38x38	8.02	9.64	Airflow, cfm NC	2892 -	3856 16	4820 21	5784 26	6748 30	7712 33	9640 38	11568 43	13496 47
40x40	8.89	10.70	Airflow, cfm NC	3210 -	4280 16	5350 22	6420 26	7490 30	8560 34	10700 39	12840 43	14980 47
42x42	9.8	11.82	Airflow, cfm NC	3546 -	4728 17	5910 22	7092 27	8274 31	9456 34	11820 39	14184 43	16548 48
44x44	10.76	12.99	Airflow, cfm NC	3897 -	5196 17	6495 23	7794 27	9093 31	10392 34	12990 40	15588 44	18186 48
46x46	11.76	14.22	Airflow, cfm NC	4266 11	5688 18	7110 23	8532 28	9954 31	11376 35	14220 40	17064 45	19908 48
48x48	12.80	15.50	Airflow, cfm NC	4650 11	6200 18	7750 23	9300 28	10850 32	12400 35	15500 40	18600 45	21700 49

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