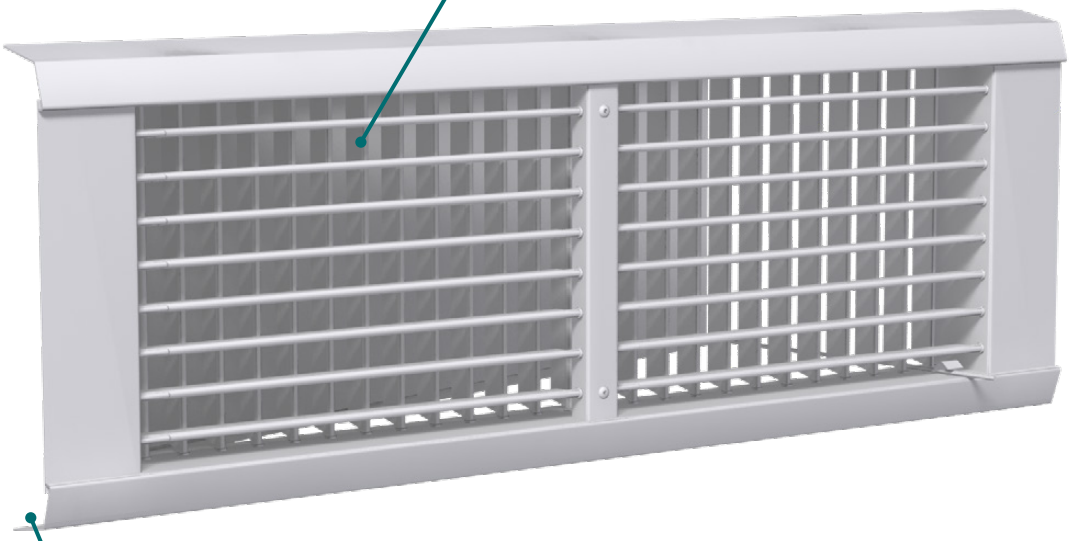
SDG

SPIRAL DUCT GRILLE

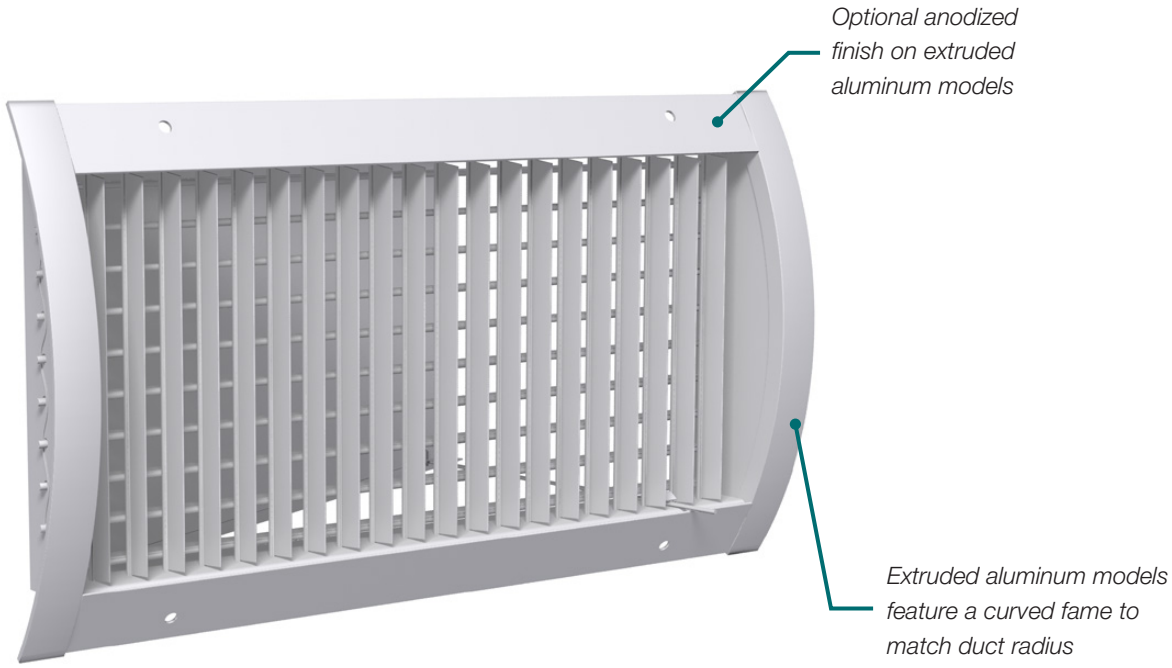
price | GRILLES

SDG
Spiral Duct Grille

Spiral Duct Grilles (SDG) are designed to be mounted on round or spiral ducts without the use of transitions. Available with single or double deflection supply and perforated return options, the SDG is highly versatile.



Steel supply grille



Extruded aluminum supply grille

CONSTRUCTION

+ **Steel and aluminum supply grilles** come in double deflection arrangement with 3/4 in. blade spacing and front blades parallel to the short or long dimension.
+ **Extruded aluminum supply grilles** are available in single or double deflection configurations and the face frame is curved to match the radius of the duct.
+ **Steel and extruded aluminum return grilles** feature a perforated screen with 51% free area.

Extruded aluminum return grille

EASY INSTALLATION

+ Countersunk holes on the grille frame allow for quick and easy installation.
+ An open cell foam gasket attached to the neck provides a tight seal around openings in the duct and a closed cell foam end gasket conforms to the duct diameter.

FINISH

+ Extruded aluminum models are available in a clear anodized finish for architectural applications.
+ Galvanized steel models can be installed unpainted; ideal for applications where the grille will be field painted to match duct finish.

ADJUSTABLE AIRFLOW

+ Individually adjustable blades provide the ability to direct supply air to meet space heating or cooling requirements.
+ An optional air scoop effectively directs airflow from the duct through the grille. The air scoop is also adjustable for air volume control.

TYPICAL APPLICATIONS

The SDG can be used for supply or return applications and is ideal for highly visible, exposed round or spiral duct mounting. With a variety of material finishes available, the SDG can be supplied to match the duct finish, combining architectural appeal with excellent performance characteristics.

CONFIGURATION OPTIONS

+ Application
  - Supply (SDG/SDGE)
  - Return (SDGR/SDGER)
+ Material
  - Steel (SDG/SDGR)
  - Aluminum (SDG)
  - Galvanized (SDG/SDGR)
  - Extruded Aluminum (SDGE/SDGER)
+ Options
  - Air scoop (AS)
  - Opposed blade damper (VSC3)

SDG with air scoop

PERFORMANCE DATA

SDG/SDGE

Core Area	Core Velocity (fpm)		300	400	500	600	700	800	1000	1200
	Velocity Pressure (in. w.g.)		0.006	0.01	0.016	0.022	0.031	0.04	0.062	0.09
	Total Pressure (in. w.g.)	0°	0.017	0.031	0.048	0.069	0.094	0.123	0.192	0.277
		22.5°	0.022	0.039	0.061	0.088	0.119	0.156	0.244	0.351
		45°	0.033	0.06	0.093	0.134	0.182	0.238	0.372	0.536
Ac = 0.22 ft.² 10 x 4	Flow Rate (cfm)		66	88	110	132	154	176	220	264
	Sound (NC)	0°	-	-	-	-	16	21	27	33
	Throw (ft)	0°	5-7-14	6-9-18	8-12-20	9-14-22	11-17-23	13-18-25	16-20-28	18-22-31
		22°	4-6-11	5-8-14	6-9-16	08-11-17	9-13-19	10-14-20	13-16-22	14-17-25
		45°	2-4-07	3-5-9	4-6-10	5-7-11	6-8-12	6-9-13	8-10-14	9-11-15
Ac = 0.26 ft.² 12 x 4 10 x 5	Flow Rate (cfm)		78	104	130	156	182	208	260	312
	Sound (NC)	0°	-	-	-	-	17	21	28	34
	Throw (ft)	0°	5-8-15	7-10-19	9-13-21	10-15-24	12-18-25	14-19-27	17-21-30	19-24-33
		22°	4-6-12	5-8-15	7-10-17	8-12-19	10-14-20	11-15-22	14-17-24	15-19-27
		45°	3-4-8	3-5-10	4-6-11	5-8-12	6-9-13	7-10-14	9-11-15	10-12-17
Ac = 0.30 ft.² 14 x 4	Flow Rate (cfm)		90	120	150	180	210	240	300	360
	Sound (NC)	0°	-	-	-	-	18	22	29	34
	Throw (ft)	0°	6-8-17	7-11-21	9-14-23	11-17-25	13-19-27	15-21-29	18-23-33	21-25-36
		22°	4-7-13	6-9-17	7-11-18	9-13-20	10-15-22	12-17-23	15-18-26	17-20-29
		45°	3-4-8	4-6-10	5-7-12	6-8-13	6-10-14	7-10-15	9-12-16	10-13-18
Ac = 0.34 ft.² 16 x 4 12 x 5 10 x 6	Flow Rate (cfm)		102	136	170	204	238	272	340	408
	Sound (NC)	0°	-	-	-	-	18	22	29	35
	Throw (ft)	0°	6-9-18	8-12-22	10-15-25	12-18-27	14-21-29	16-22-31	20-25-35	22-27-38
		22°	5-7-14	6-9-18	8-12-20	9-14-22	11-16-23	13-18-25	16-20-28	18-22-30
		45°	3-4-9	4-6-11	5-7-12	6-9-13	7-10-15	08-11-16	10-12-17	11-13-19
Ac = 0.39 ft.² 18 x 4 14 x 5 12 x 6	Flow Rate (cfm)		117	156	195	234	273	312	390	468
	Sound (NC)	0°	-	-	-	-	19	23	30	36
	Throw (ft)	0°	6-9-19	8-13-24	10-16-26	13-19-29	15-22-31	17-24-33	21-26-37	24-29-41
		22°	5-8-15	7-10-19	8-13-21	10-15-23	12-18-25	13-19-27	17-21-30	19-23-33
		45°	3-5-9	4-6-12	5-8-13	6-9-14	7-11-16	8-12-17	10-13-19	12-14-20
Ac = 0.46 ft.² 20 x 4 16 x 5 14 x 6 10 x 8	Flow Rate (cfm)		138	184	230	276	322	368	460	552
	Sound (NC)	0°	-	-	-	-	20	24	31	36
	Throw (ft)	0°	7-10-21	9-14-26	11-17-29	14-21-31	16-24-34	18-26-36	23-29-40	26-31-44
		22°	5-8-16	7-11-20	9-14-23	11-16-25	13-19-27	15-20-29	18-23-32	20-25-35
		45°	3-5-10	5-7-13	6-9-14	7-10-16	8-12-17	9-13-18	11-14-20	13-16-22
Ac = 0.52 ft.² 24 x 4 18 x 5 16 x 6	Flow Rate (cfm)		156	208	260	312	364	416	520	624
	Sound (NC)	0°	-	-	-	15	20	24	31	37
	Throw (ft)	0°	7-11-22	10-15-27	12-18-30	15-22-33	17-25-36	19-27-38	24-30-43	27-33-47
		22°	6-9-17	8-12-22	10-15-24	12-17-27	14-20-29	16-22-31	19-24-34	22-27-38
		45°	4-5-11	5-7-14	6-9-15	7-11-17	8-13-18	10-14-19	12-15-21	14-17-24
Ac = 0.60 ft.² 24 x 4 20 x 5 18 x 6 12 x 8 10 x 10	Flow Rate (cfm)		180	240	300	360	420	480	600	720
	Sound (NC)	0°	-	-	-	16	21	25	32	37
	Throw (ft)	0°	8-12-23	10-16-29	13-20-33	16-23-36	18-27-39	21-29-41	26-33-46	29-36-51
		22°	6-9-19	8-12-23	10-16-26	12-19-29	15-22-31	17-23-33	21-26-37	23-29-40
		45°	4-6-12	5-8-15	7-10-16	8-12-18	9-14-19	10-15-21	13-16-23	15-18-25

For performance notes see end of section.

PERFORMANCE DATA

SDG/SDGE

Core Area	Core Velocity (fpm)		300	400	500	600	700	800	1000	1200
	Velocity Pressure (in. w.g.)		0.006	0.01	0.016	0.022	0.031	0.04	0.062	0.09
	Total Pressure (in. w.g.)	0°	0.017	0.031	0.048	0.069	0.094	0.123	0.192	0.277
		22.5°	0.022	0.039	0.061	0.088	0.119	0.156	0.244	0.351
		45°	0.033	0.06	0.093	0.134	0.182	0.238	0.372	0.536
Ac = 0.69 ft.²	Flow Rate (cfm)		207	276	345	414	483	552	690	828
30 x 4	Sound (NC)	0°	-	-	-	17	21	26	32	38
24 x 5	Throw (ft)	0°	8-13-25	11-17-31	14-21-35	17-25-38	20-29-41	22-31-44	28-35-50	31-38-54
20 x 6		22°	7-10-20	9-13-25	11-17-28	13-20-31	16-23-33	18-25-35	22-28-40	25-31-43
14 x 8		45°	4-06-13	6-8-16	7-10-18	8-13-19	10-15-21	11-16-22	14-18-25	16-19-27
12 x 10										
Ac = 0.81 ft.²	Flow Rate (cfm)		243	324	405	486	567	648	810	972
36 x 4	Sound (NC)	0°	-	-	-	17	22	26	33	39
28 x 5	Throw (ft)	0°	9-14-27	12-18-34	15-23-38	18-27-42	21-32-45	24-34-48	30-38-54	34-42-59
22 x 6		22°	7-11-22	10-15-27	12-18-30	15-22-33	17-25-36	19-27-38	24-30-43	27-33-47
16 x 8		45°	5-7-14	6-9-17	8-11-19	9-14-21	11-16-22	12-17-24	15-19-27	17-21-29
14 x 10										
Ac = 0.90 ft.²	Flow Rate (cfm)		270	360	450	540	630	720	900	1,080
30 x 5	Sound (NC)	0°	-	-	-	18	23	27	34	39
26 x 6	Throw (ft)	0°	10-14-29	13-19-36	16-24-40	19-29-44	22-33-47	25-36-51	32-40-57	36-44-62
18 x 8		22°	8-11-23	10-15-29	13-19-32	15-23-35	18-27-38	20-29-40	25-32-45	29-35-50
16 x 10		45°	5-7-14	6-10-18	8-12-20	10-14-22	11-17-24	13-18-25	16-20-28	18-22-31
12 x 12										
Ac = 1.07 ft.²	Flow Rate (cfm)		321	428	535	642	749	856	1,070	1,284
36 x 5	Sound (NC)	0°	-	-	-	19	23	28	34	40
30 x 6	Throw (ft)	0°	10-16-31	14-21-39	17-26-44	21-31-48	24-36-52	28-39-55	35-44-62	39-48-68
22 x 8		22°	8-13-25	11-17-31	14-21-35	17-25-38	19-29-41	22-31-44	28-35-49	31-38-54
18 x 10		45°	5-8-16	7-10-20	9-13-22	10-16-24	12-18-26	14-20-28	17-22-31	20-24-34
14 x 12										
Ac = 1.18 ft.²	Flow Rate (cfm)		354	472	590	708	826	944	1,180	1,416
34 x 6	Sound (NC)	0°	-	-	-	19	24	28	35	40
24 x 8	Throw (ft)	0°	11-16-33	15-22-41	18-27-46	22-33-50	26-38-54	29-41-58	36-46-65	41-50-71
20 x 10		22°	9-13-26	12-18-33	15-22-37	18-26-40	20-31-43	23-33-46	29-37-52	33-40-57
16 x 12		45°	5-8-16	7-11-20	9-14-23	11-16-25	13-19-27	15-20-29	18-23-32	20-25-35
Ac = 1.34 ft.²	Flow Rate (cfm)		402	536	670	804	938	1,072	1,340	1,608
28 x 8	Sound (NC)	0°	-	-	-	20	24	29	35	41
22 x 10	Throw (ft)	0°	12-18-35	16-23-44	19-29-49	23-35-53	27-41-58	31-44-62	39-49-69	44-53-76
18 x 12		22°	9-14-28	12-19-35	16-23-39	19-28-43	22-33-46	25-35-49	31-39-55	35-43-60
		45°	6-9-18	8-12-22	10-15-24	12-18-27	14-20-29	16-22-31	19-24-35	22-27-38
Ac = 1.60 ft.²	Flow Rate (cfm)		480	640	800	960	1,120	1,280	1,600	1,920
32 x 8	Sound (NC)	0°	-	-	-	20	25	29	36	42
26 x 10	Throw (ft)	0°	13-19-38	17-25-48	21-32-53	25-38-58	30-45-63	34-48-67	42-53-75	48-58-83
22 x 12		22°	10-15-31	14-20-38	17-25-43	20-31-47	24-36-50	27-38-54	34-43-60	38-47-66
		45°	6-10-19	8-13-24	11-16-27	13-19-29	15-22-32	17-24-34	21-27-38	24-29-41
Ac = 1.80 ft.²	Flow Rate (cfm)		540	720	900	1,080	1,260	1,440	1,800	2,160
36 x 8	Sound (NC)	0°	-	-	15	21	26	30	37	42
28 x 10	Throw (ft)	0°	14-20-41	18-27-51	23-34-57	27-41-62	32-47-67	36-51-72	45-57-80	51-62-88
24 x 12		22°	11-16-32	14-22-40	18-27-45	22-32-50	25-38-54	29-40-57	36-45-64	40-50-70
		45°	7-10-20	9-14-25	11-17-28	14-20-31	16-24-33	18-25-36	23-28-40	25-31-44

For performance notes see end of section.

PERFORMANCE DATA

SDG/SDGE

Core Area	Core Velocity (fpm)		300	400	500	600	700	800	1000	1200
	Velocity Pressure (in. w.g.)		0.006	0.01	0.016	0.022	0.031	0.04	0.062	0.09
	Total Pressure (in. w.g.)	0°	0.017	0.031	0.048	0.069	0.094	0.123	0.192	0.277
		22.5°	0.022	0.039	0.061	0.088	0.119	0.156	0.244	0.351
		45°	0.033	0.06	0.093	0.134	0.182	0.238	0.372	0.536
Ac = 2.08 ft.² 32 x 10 28 x 12	Flow Rate (cfm)		624	832	1,040	1,248	1,456	1,664	2,080	2,496
	Sound (NC)	0°	-	-	16	22	26	30	37	43
	Throw (ft)	0°	15-22-44	19-29-54	24-36-61	29-44-67	34-51-72	39-54-77	48-61-86	54-67-94
		22°	12-17-35	16-23-44	19-29-49	23-35-53	27-41-58	31-44-62	39-49-69	44-53-75
		45°	7-11-22	10-15-27	12-18-30	15-22-33	17-25-36	19-27-38	24-30-43	27-33-47
Ac = 2.45 ft.² 32 x 12	Flow Rate (cfm)		735	980	1,225	1,470	1,715	1,960	2,450	2,940
	Sound (NC)	0°	-	-	17	22	27	31	38	44
	Throw (ft)	0°	16-24-47	21-32-59	26-39-66	32-47-72	37-55-78	42-59-83	53-66-93	59-72-102
		22°	13-19-38	17-25-47	21-32-53	25-38-58	29-44-62	34-47-67	42-53-75	47-58-82
		45°	8-12-24	11-16-30	13-20-33	16-24-36	18-28-39	21-30-42	26-33-47	30-36-51
Ac = 2.78 ft.² 36 x 12	Flow Rate (cfm)		834	1,112	1,390	1,668	1,946	2,224	2,780	3,336
	Sound (NC)	0°	-	-	17	23	28	32	39	44
	Throw (ft)	0°	17-25-50	22-34-63	28-42-70	34-50-77	39-59-83	45-63-89	56-70-99	63-77-109
		22°	13-20-40	18-27-50	22-34-56	27-40-62	31-47-67	36-50-71	45-56-80	50-62-87
		45°	8-13-25	11-17-31	14-21-35	17-25-38	20-29-42	22-31-44	28-35-50	31-38-54

Performance Notes:

1. Te1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Performance data is for the grille less air scoop, less damper and with no ceiling effect.
5. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
6. Throw data is based on supply air and room air being at isothermal conditions.
7. NC values are based on room absorption of 10 dB re 10^{-12} Watts @ 0° deflection and one diffuser.
8. Blanks "-" indicate an NC level below 15.
9. The listed deflection settings refer to horizontal deflection.

PERFORMANCE DATA

SDGR/SDGER

Core Area (sq. ft.)	Nominal Size			Core Velocity (fpm) Velocity Pressure (in. w.g.) Neg. Static Pressure (in. w.g.)	200 0.002 0.019	300 0.006 0.043	400 0.010 0.076	500 0.016 0.118	600 0.022 0.171	700 0.031 0.232	800 0.040 0.303	900 0.050 0.384	1000 0.062 0.474
									NC 20		NC 30		
0.15	6 x 5 10 x 3	7 x 4		Flow Rate (cfm) Sound (NC)	30 -	45 -	60 -	75 20	90 25	105 29	120 33	135 36	150 39
0.18	6 x 6 8 x 4	7 x 5		Flow Rate (cfm) Sound (NC)	36 -	54 -	72 -	90 20	108 25	126 29	144 33	162 36	180 39
0.22	7 x 6 10 x 4			Flow Rate (cfm) Sound (NC)	44 -	66 -	88 -	110 20	132 25	154 29	176 33	198 36	220 39
0.26	8 x 6 12 x 4	10 x 5		Flow Rate (cfm) Sound (NC)	52 -	78 -	104 -	130 20	156 25	182 29	208 33	234 36	260 39
0.30	14 x 4			Flow Rate (cfm) Sound (NC)	60 -	90 -	120 -	150 20	180 25	210 29	240 33	270 36	300 39
0.34	10 x 6 16 x 4	12 x 5		Flow Rate (cfm) Sound (NC)	68 -	102 -	136 -	170 20	204 25	238 29	272 33	306 36	340 39
0.39	8 x 8 14 x 5	12 x 6 18 x 4		Flow Rate (cfm) Sound (NC)	78 -	117 -	156 -	195 20	234 25	273 29	312 33	351 36	390 39
0.46	20 x 4 16 x 5	14 x 6 10 x 8		Flow Rate (cfm) Sound (NC)	92 -	138 -	184 -	230 20	276 25	322 29	368 33	414 36	460 39
0.52	24 x 4 18 x 5	16 x 6		Flow Rate (cfm) Sound (NC)	104 -	156 -	208 -	260 20	312 25	364 29	416 33	468 36	520 39
0.60	28 x 4 20 x 5	18 x 6 12 x 8	10 x 10	Flow Rate (cfm) Sound (NC)	120 -	180 -	240 -	300 20	360 25	420 29	480 33	540 36	600 39
0.69	30 x 4 24 x 5	20 x 6 14 x 8	12 x 10	Flow Rate (cfm) Sound (NC)	138 -	207 -	276 -	345 20	414 25	483 29	552 33	621 36	690 39
0.81	36 x 4 28 x 5	22 x 6 16 x 8	14 x 10	Flow Rate (cfm) Sound (NC)	162 -	243 -	324 -	405 20	486 25	567 29	648 33	729 36	810 39
0.90	30 x 5 26 x 6	18 x 8 16 x 10	12 x 12	Flow Rate (cfm) Sound (NC)	180 -	270 -	360 -	450 20	540 25	630 29	720 33	810 36	900 39
1.07	36 x 5 30 x 6	22 x 10 18 x 10	14 x 12	Flow Rate (cfm) Sound (NC)	214 -	321 -	428 -	535 20	642 25	749 29	856 33	963 36	1070 39
1.18	34 x 6 24 x 8	20 x 10 16 x 12		Flow Rate (cfm) Sound (NC)	236 -	354 -	472 -	590 20	708 25	826 29	944 33	1062 36	1180 39
1.34	36 x 6 28 x 8	22 x 10 18 x 12		Flow Rate (cfm) Sound (NC)	268 -	402 -	536 -	670 20	804 25	938 29	1072 33	1206 36	1340 39
1.60	30 x 8 24 x 10	22 x 12		Flow Rate (cfm) Sound (NC)	320 -	480 -	640 -	800 20	960 25	1120 29	1280 33	1440 36	1600 39
1.80	36 x 8 30 x 10	24 x 12		Flow Rate (cfm) Sound (NC)	360 -	540 -	720 -	900 20	1080 25	1260 29	1440 33	1620 36	1800 39
2.08	36 x 10 30 x 12			Flow Rate (cfm) Sound (NC)	416 -	624 -	832 -	1040 20	1248 25	1456 29	1664 33	1872 36	2080 39
2.45	32 x 12			Flow Rate (cfm) Sound (NC)	490 -	735 -	980 -	1225 20	1470 25	1715 29	1960 33	2205 36	2450 39
2.78	36 x 12			Flow Rate (cfm) Sound (NC)	556 -	834 -	1112 -	1390 20	1668 25	1946 29	2224 33	2502 36	2780 39
									NC 20		NC 30		

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. NC values are based on room absorption of 10 dB re 10^{-12} Watts and one grille.
5. Blanks "-" indicate an NC level below 15.

price | GRILLES

Product Improvement is a continuing endeavour at Price. Therefore, specifications are subject to change without notice. Consult your Price Sales Representative for current specifications or more detailed information. Not all products may be available in all geographic areas. All goods described in this document are warranted as described in the Limited Warranty shown at **priceindustries**.com. The complete Price product catalog can be viewed online at **priceindustries**.com.