

SG-PR Security Grilles & Registers

Supply Airflow Data

Nominal Duct Size (mm)	Face Velocity, (m/s)	1.1	1.7	2.3	2.9	3.4	4.0	4.6	5.1	5.7
	Velocity Pressure, Pa	0.16	0.35	0.62	0.97	1.40	1.90	2.48	3.14	3.88
	Total Pressure, Pa	2.89	6.50	11.56	18.06	26.01	35.40	46.24	58.52	72.24
	Neck Velocity, (m/s)	0.5	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5
150mm x 150mm	Air Flow, Liters/s	12	18	24	29	35	41	47	53	59
	NC	-	-	-	-	11	15	19	23	26
	Throw, m	0.3 - 0.5 - 1.5	0.5 - 1.3 - 2.3	1 - 1.5 - 3	1.3 - 1.8 - 3.8	1.5 - 2.3 - 4	1.8 - 2.5 - 4.5	1.8 - 3 - 5	2.3 - 3.3 - 5	2.5 - 3.8 - 5.3
250mm x 150mm	Air Flow, Liters/s	18	27	35	44	53	62	71	80	88
	NC	-	-	-	-	12	17	21	24	28
	Throw, m	0.3 - 0.5 - 1.8	0.5 - 1.3 - 2.8	1.3 - 1.8 - 3.8	1.5 - 2.3 - 4.5	1.8 - 2.8 - 5	2.3 - 3 - 5.5	2.5 - 3.8 - 5.8	2.8 - 4 - 6	3 - 4.5 - 6.5
300mm x 150mm	Air Flow, Liters/s	24	35	47	59	71	83	94	106	118
	NC	-	-	-	-	14	18	22	26	29
	Throw, m	0.3 - 1 - 2.3	1 - 1.5 - 3	1.5 - 2.3 - 4.3	1.8 - 2.5 - 5.3	2.3 - 3 - 5.8	2.5 - 3.8 - 6.5	2.8 - 4.3 - 6.8	3 - 4.5 - 7	3.3 - 5.3 - 7.5
400mm x 150mm	Air Flow, Liters/s	29	44	59	74	88	103	118	133	147
	NC	-	-	-	-	15	19	23	27	30
	Throw, m	0.3 - 1 - 2.5	1 - 1.8 - 3.3	1.5 - 2.5 - 4.5	1.8 - 2.8 - 5.8	2.5 - 3.3 - 6.5	2.8 - 4 - 7	3 - 4.5 - 7.5	3.3 - 5.3 - 8	4 - 5.8 - 8.3
450mm x 150mm	Air Flow, Liters/s	35	53	71	88	106	124	142	159	177
	NC	-	-	-	-	15	20	24	27	31
	Throw, m	0.5 - 1 - 2.5	1 - 1.8 - 3.8	1.8 - 2.5 - 5.3	2.3 - 3 - 6.5	2.5 - 3.8 - 7	3 - 4.3 - 7.5	3.3 - 5.3 - 8.3	3.8 - 5.8 - 8.8	4.3 - 6.5 - 9.3
550mm x 150mm	Air Flow, Liters/s	41	62	83	103	124	145	165	186	206
	NC	-	-	-	11	16	21	25	28	31
	Throw, m	0.5 - 1.3 - 2.8	1.3 - 2.3 - 4	1.8 - 2.8 - 5.5	2.3 - 3.3 - 6.8	2.8 - 4 - 7.5	3 - 5 - 8.3	3.8 - 5.5 - 8.8	4 - 6 - 9.5	4.5 - 6.8 - 10
600mm x 150mm	Air Flow, Liters/s	47	71	94	118	142	165	189	212	236
	NC	-	-	-	11	17	21	25	29	32
	Throw, m	0.5 - 1.3 - 3	1.3 - 2.3 - 4.3	1.8 - 3 - 5.8	2.5 - 3.8 - 7.3	3 - 4.3 - 8.3	3.3 - 5.3 - 8.8	4 - 5.8 - 9.5	4.3 - 6.5 - 10	5 - 7.3 - 10.8
Nominal Duct Size (mm)	Face Velocity, (m/s)	1.1	1.7	2.3	2.9	3.4	4.0	4.6	5.1	5.7
	Velocity Pressure, Pa	0.79	1.77	3.14	4.91	7.07	9.62	12.56	15.90	19.63
	Total Pressure, Pa	2.89	6.50	11.56	18.06	26.01	35.40	46.24	58.52	72.24
	Neck Velocity, (m/s)	1.1	1.7	2.3	2.9	3.4	4.0	4.6	5.1	5.7
250mm x 250mm	Air Flow, Liters/s	27	40	53	66	80	93	106	119	133
	NC	-	-	-	-	14	19	23	26	29
	Throw, m	0.3 - 1 - 2.3	1 - 1.5 - 3.3	1.5 - 2.3 - 4.3	1.8 - 2.8 - 5.5	2.3 - 3.3 - 6	2.5 - 4 - 6.8	3 - 4.3 - 7	3.3 - 5 - 7.5	3.8 - 5.5 - 8
300mm x 250mm	Air Flow, Liters/s	35	53	71	88	106	124	142	159	177
	NC	-	-	-	-	15	20	24	27	31
	Throw, m	0.5 - 1 - 2.5	1 - 1.8 - 3.8	1.8 - 2.5 - 5.3	2.3 - 3 - 6.5	2.5 - 3.8 - 7	3 - 4.3 - 7.5	3.3 - 5.3 - 8.3	3.8 - 5.8 - 8.8	4.3 - 6.5 - 9.3
400mm x 250mm	Air Flow, Liters/s	44	66	88	111	133	155	177	199	221
	NC	-	-	-	11	16	21	25	28	32
	Throw, m	0.5 - 1.3 - 2.8	1.3 - 2.3 - 4.3	1.8 - 2.8 - 5.5	2.5 - 3.8 - 7	2.8 - 4.3 - 8	3.3 - 5 - 8.5	3.8 - 5.5 - 9.3	4.3 - 6.5 - 9.8	4.5 - 7 - 10.3
450mm x 250mm	Air Flow, Liters/s	53	80	106	133	159	186	212	239	265
	NC	-	-	-	12	17	22	26	29	32
	Throw, m	0.5 - 1.3 - 3	1.3 - 2.5 - 4.5	2.3 - 3 - 6	2.5 - 4 - 7.5	3 - 4.5 - 8.8	3.8 - 5.5 - 9.5	4.3 - 6 - 10	4.5 - 7 - 10.8	5.3 - 7.5 - 11.3
550mm x 250mm	Air Flow, Liters/s	62	93	124	155	186	217	248	279	310
	NC	-	-	-	12	18	22	26	30	33
	Throw, m	0.5 - 1.5 - 3.3	1.5 - 2.5 - 5	2.3 - 3.3 - 6.8	2.8 - 4.3 - 8.3	3.3 - 5 - 9.5	4 - 5.8 - 10	4.5 - 6.8 - 11	5 - 7.5 - 11.5	5.5 - 8.3 - 12.3
600mm x 250mm	Air Flow, Liters/s	71	106	142	177	212	248	283	319	354
	NC	-	-	-	13	18	23	27	30	34
	Throw, m	0.5 - 1.5 - 3.8	1.5 - 2.8 - 5.5	2.5 - 3.8 - 7	3 - 4.5 - 8.8	3.8 - 5.5 - 10	4.3 - 6 - 11	5 - 7 - 11.5	5.5 - 8 - 12.3	6.8 - 8.8 - 13

All Pressures in Pa.

Throw Data is Isothermal, at 0.8, 0.5 and 0.3 m/s

NC based on a room absorption of 10 dB, with a base of 10<sup>-12</sup> Watts.

All data based on tests conducted in accordance with ASHRAE Standard 70-91.

Note: All dimensions are nominal • product will be built to the closest inch equivalent dimension unless specially ordered to true metric

• contact factory for availability of sizes •

990 Security Row • Richardson, Texas 75081  
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**SG-PR Security Grilles & Registers**

**Supply Airflow Data**

Nominal Duct Size (mm)	Face Velocity, (m/s)	1.1	1.7	2.3	2.9	3.4	4.0	4.6	5.1	5.7
	Velocity Pressure, Pa	0.16	0.35	0.62	0.97	1.40	1.90	2.48	3.14	3.88
	Total Pressure, Pa	2.89	6.50	11.56	18.06	26.01	35.40	46.24	58.52	72.24
	Neck Velocity, (m/s)	0.5	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5
300mm x 300mm	Air Flow, Liters/s	47	71	94	118	142	165	189	212	236
	NC	-	-	-	11	17	21	25	29	32
	Throw, m	0.5 - 1.8 - 3	1.8 - 2.8 - 4.8	1.8 - 3 - 5.8	2.5 - 3.8 - 7.8	3 - 4.8 - 8.8	3.8 - 5.8 - 8.8	4 - 5.8 - 9.5	4.8 - 6.5 - 10	5 - 7.8 - 10.8
400mm x 300mm	Air Flow, Liters/s	59	88	118	147	177	206	236	265	295
	NC	-	-	-	12	18	22	26	30	33
	Throw, m	0.5 - 1.5 - 3.8	1.5 - 2.5 - 5	2.8 - 3.8 - 6.5	2.8 - 4 - 8.8	3.8 - 5 - 9.8	3.8 - 5.8 - 10	4.8 - 6.5 - 10.8	5 - 7.8 - 11.8	5.5 - 8.8 - 12
450mm x 300mm	Air Flow, Liters/s	71	106	142	177	212	248	283	319	354
	NC	-	-	-	13	18	23	27	30	34
	Throw, m	0.5 - 1.5 - 3.8	1.5 - 2.8 - 5.5	2.5 - 3.8 - 7	3 - 4.5 - 8.8	3.8 - 5.5 - 10	4.8 - 6 - 11	5 - 7 - 11.5	5.5 - 8 - 12.8	5.8 - 8.8 - 13
550mm x 300mm	Air Flow, Liters/s	83	124	165	206	248	289	330	372	413
	NC	-	-	-	14	19	24	28	31	34
	Throw, m	0.5 - 1.5 - 4	1.5 - 2.8 - 5.8	2.5 - 4 - 7.5	3.8 - 5 - 9.8	4 - 5.8 - 11	4.5 - 6.8 - 11.5	5.8 - 7.5 - 12.5	5.8 - 8.5 - 13.5	6.5 - 9.8 - 14
600mm x 300mm	Air Flow, Liters/s	94	142	189	236	283	330	378	425	472
	NC	-	-	-	14	20	24	28	32	35
	Throw, m	1 - 1.8 - 4.8	1.8 - 3 - 6	2.8 - 4.8 - 8.8	3.8 - 5.8 - 10.8	4.8 - 6 - 11.5	5 - 7.8 - 12.5	5.5 - 8.8 - 13.5	6 - 9.8 - 14.8	7 - 10.8 - 15
400mm x 400mm	Air Flow, Liters/s	74	111	147	184	221	258	295	332	369
	NC	-	-	-	13	19	23	27	31	34
	Throw, m	0.5 - 1.5 - 3.8	1.5 - 2.8 - 5.5	2.5 - 3.8 - 7.8	3 - 4.5 - 9.8	3.8 - 5.5 - 10.8	4.8 - 6.5 - 11	5 - 7.8 - 12	5.5 - 8.8 - 12.5	6 - 9.8 - 13
450mm x 400mm	Air Flow, Liters/s	88	133	177	221	265	310	354	398	442
	NC	-	-	-	14	19	24	28	31	35
	Throw, m	0.5 - 1.8 - 4	1.8 - 3 - 6	2.8 - 4 - 8	3.8 - 5 - 10	4 - 6 - 11.8	4.5 - 7 - 12.8	5.8 - 8 - 13	6 - 8.8 - 13.8	6.8 - 10 - 14.8
550mm x 400mm	Air Flow, Liters/s	103	155	206	258	310	361	413	465	516
	NC	-	-	-	15	20	25	29	32	36
	Throw, m	1 - 1.8 - 4.8	1.8 - 3.8 - 6.5	2.8 - 4.8 - 8.5	3.8 - 5.5 - 10.8	4.8 - 6.5 - 12.8	5 - 7.5 - 13	5.8 - 8.5 - 14	6.5 - 9.8 - 15	7.8 - 10.8 - 15.5
600mm x 400mm	Air Flow, Liters/s	118	177	236	295	354	413	472	531	590
	NC	-	-	-	15	21	25	29	33	36
	Throw, m	1 - 1.8 - 4.5	1.8 - 3.8 - 7	3 - 4.5 - 9.8	4 - 5.8 - 11.5	4.5 - 7 - 13	5.5 - 8 - 14	6 - 9.8 - 15	7 - 10.8 - 15.8	7.5 - 11.5 - 16.8
450mm x 450mm	Air Flow, Liters/s	106	159	212	265	319	372	425	478	531
	NC	-	-	-	15	20	25	29	32	35
	Throw, m	1 - 1.8 - 4.8	1.8 - 3.8 - 6.5	3 - 4.8 - 8.8	3.8 - 5.5 - 11	4.8 - 6.5 - 12.8	5.8 - 7.5 - 13.5	5.8 - 8.8 - 14.8	6.5 - 9.8 - 15	7.8 - 11 - 15.8
550mm x 450mm	Air Flow, Liters/s	88	133	177	221	265	310	354	398	442
	NC	-	-	-	15	21	25	29	33	36
	Throw, m	0.8 - 1 - 3.8	1 - 2.8 - 5.8	1.8 - 3.8 - 6.8	2.8 - 4.8 - 8.5	3.8 - 5.8 - 10	4 - 5.8 - 12	4.5 - 6.8 - 13	5.8 - 7.5 - 13.8	5.5 - 8.5 - 14.8
600mm x 450mm	Air Flow, Liters/s	142	212	283	354	425	495	566	637	708
	NC	-	-	-	16	21	26	30	33	37
	Throw, m	1 - 2.8 - 5.8	2.8 - 3.8 - 7.5	3.8 - 5.8 - 10	4.8 - 6.5 - 12.5	5.8 - 7.5 - 14.8	5.8 - 8.8 - 15.8	6.8 - 10 - 16.5	7.5 - 11.8 - 17.8	8.5 - 12.5 - 18.8
550mm x 550mm	Air Flow, Liters/s	145	217	289	361	434	506	578	650	723
	NC	-	-	-	16	21	26	30	34	37
	Throw, m	1 - 2.8 - 5.8	2.8 - 4 - 7.5	3.8 - 5.8 - 10	4.8 - 6.5 - 12.8	5.8 - 7.5 - 14.8	5.8 - 8.8 - 15.5	6.8 - 10 - 16.5	7.5 - 11.5 - 17.8	8.5 - 12.8 - 18.5
600mm x 550mm	Air Flow, Liters/s	165	248	330	413	495	578	661	743	826
	NC	-	-	-	17	22	27	31	34	37
	Throw, m	1 - 2.5 - 5.5	2.5 - 4 - 8.8	3.8 - 5.5 - 11	4.5 - 6.8 - 13.8	5.5 - 8.8 - 15.8	6.5 - 9.5 - 16.5	7.8 - 11 - 17.8	8.8 - 12.8 - 19	9.8 - 13.8 - 19.8
600mm x 600mm	Air Flow, Liters/s	189	283	378	472	566	661	755	849	944
	NC	-	-	11	17	23	27	31	35	38
	Throw, m	1.8 - 2.5 - 5.8	2.5 - 4.8 - 8.8	4 - 5.8 - 11.5	5 - 7.8 - 14.8	5.8 - 8.8 - 16.5	6.8 - 10 - 17.8	7.5 - 11.5 - 19	8.8 - 13 - 20	9.8 - 14.8 - 21.8

All Pressures in Pa.  
 Throw Data is Isothermal, at 0.8, 0.5 and 0.3 m/s  
 NC based on a room absorption of 10 dB, with a base of 10<sup>-12</sup> Watts.  
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