

Technical Data Sheet



GS Linear Slot Grille

GS1 Linear Slot Grilles has set the industry standard in terms of Brilliant aerodynamic and acoustic performance for many years.

The GS range is suited to variable volume applications due to its excellent **low flow rate air diffusion** characteristics and **high air handling capacity**.

The novel air pattern control element design allows any air diffusion to vertical projection, without any change in the facial appearance.

Or the Direction of Flow can be varying to horizontal left or right direction according to specifications.

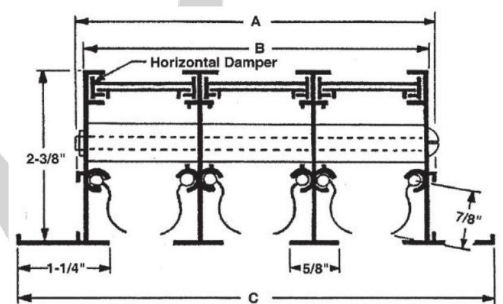
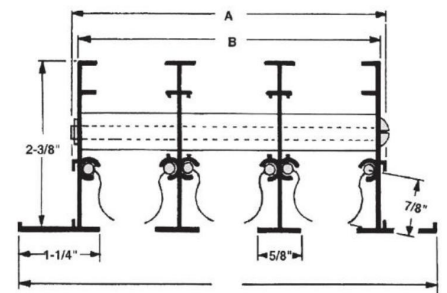
GS Grilles are suitable for all commercial and industrial projects requiring single or multi-slot diffusers for ceilings or sidewall supply and exhaust.

Grilles are manufactured from aluminium and powder coated to ensure finish of the highest quality fixed or clipped to cross stays allowing easy removal of internal vanes and pattern control elements.

GS Linear Slot Grilles with deflection blades and control dampers is constructed of aluminium alloy and are Powdercoated.

The Fully adjustable deflection blades allow for the air pattern to be controlled along the ceiling, straight down or at some intermediate setting

Slots are available in 3/4" or 1" width or as per client requirement.



For 3/4" Slot

No. of Slots	1	2	3	4	5	6	7	8
A	1.65	2.99	4.33	5.67	7.01	8.35	9.65	10.94
B	1.42	2.76	4.09	5.43	6.81	8.15	9.41	10.71
C	3.31	4.61	5.94	7.28	8.58	9.96	11.38	12.64
CFM/ft	10-100	20-125	30-150	40-200	50-250	60-300	70-350	80-400

For 1" Slot

No. of Slots	1	2	3	4	5	6	7	8
A	1.94	3.58	5.23	6.88	8.52	10.17	11.81	13.46
B	1.70	3.35	4.99	6.64	8.28	9.93	11.58	13.22
C	3.48	5.13	6.77	8.42	10.06	11.71	13.36	15.00s
CFM/ft	10-100	20-125	30-150	40-200	50-250	60-300	70-350	80-400

Technical Data Sheet



AirQon Synergies

Types of GS Linear Slot Grilles available:

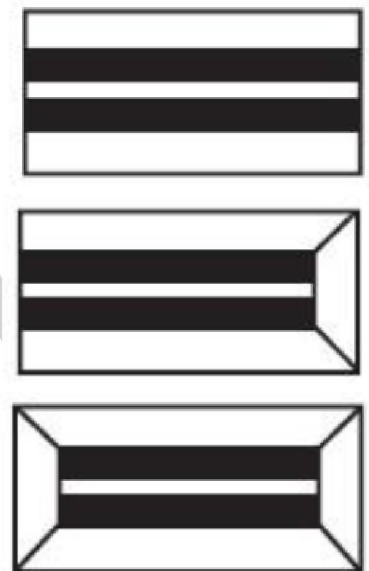
GSL – Linear Slot Grille (Left side End Cap)

GSR - Linear Slot Grille (Right side End Cap)

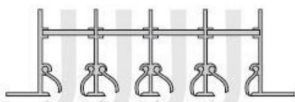
GSB - Linear Slot Grille (Both side End Cap)

Number Slot can go upto 10 Slots in regular and above that, it can be made on request

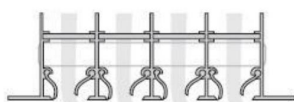
GS1, GS2, GS3.....



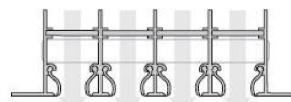
Air Flow Directions:



Left Horizontal Flow



Right Horizontal Flow



Vertical Flow

Throw Data:

These data have been carried out on 4' long grille.

Sound Data:

Sound data (NC values) shown in the Performance Tables are based on a room absorption of 10dB, re 10¹² Watts and a 4-feet unit test length. To determine NC values for other lengths, add NC value to catalog data as follows :

Grille Active Length (ft)	2	3	4	5	6-8
Add NC Value (dB)	-3.0	-1.5	0	1.0	2.0

Technical Data Sheet



AirQon Synergies

Selection Procedure:

The horizontal throw data is presented in the performance data pages with all slots supplying air in a given direction. To determine two-way throw, use the catalog throw data for the desired quantity of air from the number of slots in each direction and reduce the throw by twenty percent.

Example:

Determine the throw for an GS3 (3/4" Slot Width) 2 ft. long, 3-slot diffuser with 250 CFM in one direction and 120 CFM in the other.

- A. 250 CFM, 2', 2-slots = 125 CFM/ft Catalog throws = 31 - 37
Throws x 0.80 = 25 - 30
- B. 120 CFM, 2', 1-slot = 60 CFM/ft Catalog throws = 22 - 26
Throw x 0.80 = 18 - 21

Slot Width	Number of Slots	Horizontal	Vertical	Return
3/4"	1	0.073	0.121	0.123
	2	0.135	0.180	0.184
	3	0.201	0.237	0.242
	4	0.265	0.295	0.301
	5	0.330	0.355	0.362
	6	0.395	0.413	0.421
	7	0.455	0.470	0.479
	8	0.520	0.530	0.539
1"	1	0.088	0.184	0.188
	2	0.162	0.274	0.281
	3	0.241	0.360	0.367
	4	0.318	0.448	0.457
	5	0.396	0.540	0.551
	6	0.474	0.628	0.641
	7	0.546	0.714	0.732
	8	0.631	0.806	0.822

Area Factor Summary

Technical Data Sheet



AirQon Synergies

GS (3/4" slot width)

Slots	CFM/FT.	10	20	30	40	50	60	70	80	90	100	125	150	200	250	300	350	400	
1	HOR. SP	.022	.089	.200	.356	.557	.802	1.092	1.426	1.804	2.228								
	THROW	7-10	13-15	15-19	18-21	20-24	22-26	23-28	25-30	27-32	28-33								
	NC	<20	<20	30	39	41	47	>50	>50	>50	>50								
	VERT. SP	.010	.039	.088	.157	.245	.353	.480	.627	.794	.980								
	THROW	2-5	9-15	16-23	22-27	25-30	27-32	29-35	31-37	33-39	35-42								
2	HOR. SP	<20	<20	<20	.022	.050	.089	.139	.200	.273	.356	.451	.557	.870					
	THROW		9-13	14-19	18-21	20-24	22-26	23-28	25-30	27-32	28-33	31-37							
	NC		<20	<20	<20	28	33	38	42	46	>50	>50							
	VERT. SP		.010	.022	.039	.061	.088	.120	.157	.199	.245	.383							
	THROW		3-6	7-13	12-21	19-26	23-31	27-35	30-37	33-39	35-42	39-46							
3	HOR. SP				.022	.040	.062	.089	.121	.158	.200	.248	.387	.557					
	THROW			11-16	15-21	19-24	23-26	23-28	25-30	27-32	28-33	31-37	34-41						
	NC			<20	<20	<20	22	27	31	35	38	46	50						
	VERT. SP			.010	.017	.027	.039	.053	.070	.088	.109	.170	.245						
	THROW			4-8	7-13	10-20	15-26	26-30	25-34	28-38'	31-42	39-46	43-51						
4	HOR. SP				<20	<20	<20	<20	<20	<20	<20	<20	26	32					
	THROW				.022	.035	.050	.068	.089	.113	.139	.218	.313	.557					
	NC				<20	<20	<20	<20	24	27	31	38	43	>50					
	VERT. SP				.010	.015	.022	.030	.039	.050	.061	.096	.138	.245					
	THROW				4-9	7-13	10-18	13-25	17-30	22-33	27-36	34-46	40-51	50-58					
5	HOR. SP						.022	.032	.044	.057	.072	.089	.139	.200	.356	.557			
	THROW					15-20	18-24	20-28	23-30	26-32	29-33	31-37	34-41	40-46	44-52				
	NC					<20	<20	<20	<20	21	24	32	37	46	>50				
	VERT. SP					.010	.014	.019	.025	.032	.039	.061	.088	.157	.245				
	THROW					5-10	7-13	9-18	12-23	16-29	19-33	30-41	36-49	48-58	56-65				
6	HOR. SP						.022	.030	.040	.050	.062	.097	.139	.248	.387	.557			
	THROW					16-22	19-26	21-29	24-33	27-35	31-37	34-41	40-47	44-52	48-57				
	NC					<20	<20	<20	<20	<20	<20	27	32	41	49	>50			
	VERT. SP					.010	.013	.017	.022	.027	.043	.061	.109	.170	.245				
	THROW					5-10	7-14	9-18	12-22	15-27	23-38	33-45	44-58	55-65	61-71				
7	HOR. SP							.022	.029	.037	.045	.071	.102	.182	.284	.409	.557		
	THROW							17-24	20-27	22-31	25-34	31-37	34-41	40-47	44-52	48-56	52-61		
	NC							<20	<20	<20	<20	22	28	37	44	50	>50		
	VERT. SP							.010	.013	.016	.020	.031	.045	.080	.125	.180	.245		
	THROW							6-11	7-14	9-18	12-22	18-33	26-42	41-55	51-65	61-70	66-77		
8	HOR. SP								.022	.028	.035	.054	.078	.139	.218	.313	.426	.557	
	THROW								18-26	21-29	23-32	29-37	35-41	40-47	44-52	48-56	52-61	56-66	
	NC								<20	<20	<20	<20	24	34	41	46	50	>50	
	VERT. SP								.010	.012	.015	.024	.034	.061	.096	.138	.188	.245	
	THROW								6-12	8-15	10-18	15-28	22-39	38-52	48-64	57-70	66-77	70-82	

NC Data based on 10dB room attenuation.

Throw Data based on isothermal air at 100 and 50 fpm terminal velocity.

Horizontal Throw is 1 way pattern.

Static Pressure (SP) in inches w.g.

Technical Data Sheet



AirQon Synergies

GS (1" slot width)

Slot s	CFM/FT.	10	20	30	40	50	60	70	80	90	100	125	150	200	250	300	350	400	
1	HOR. SP	.010	.040	.090	.160	.250	.360	.490	.640	.810	1.000								
	THROW	4-8	10-15	15-19	18-21	20-24	22-26	23-28	25-30	27-32	28-33								
	NC	<20	<20	25	34	41	47	>50	>50	>50	>50								
	VERT. SP	.007	.029	.066	.117	.183	.263	.358	.468	.592	.731								
	THROW	2-4	8-15	16-22	21-27	25-29	27-32	29-35	31-37	33-39	35-42								
2	HOR. SP		.010	.023	.040	.063	.090	.122	.160	.203	.250	.391							
	THROW		6-11	11-15	14-20	18-24	22-26	23-28	25-30	27-32	28-33	31-37							
	NC		<20	<20	<20	22	28	33	37	41	44	50							
	VERT. SP		.007	.016	.029	.046	.066	.089	.117	.148	.183	.285							
	THROW		3-6	6-12	11-21	17-25	22-30	26-35	29-37	33-39	35-42	39-46							
3	HOR. SP			.010	.018	.028	.040	.054	.071	.090	.111	.174	.250						
	THROW			7-13	12-17	15-21	18-24	21-28	23-30	26-32	28-33	31-37	34-41						
	NC			<20	<20	<20	<20	22	26	30	33	40	46						
	VERT. SP			.007	.013	.020	.029	.040	.052	.066	.081	.127	.183						
	THROW			3-7	6-12	9-18	13-21	18-29	24-38	27-37	30-41	37-46	43-51						
4	HOR. SP				.010	.016	.023	.031	.040	.051	.063	.098	.141	.250					
	THROW				8-15	13-18	15-21	18-25	20-28	23-32	25-33	32-37	34-41	40-47					
	NC				<20	<20	<20	<20	<20	22	25	32	38	47					
	VERT. SP				.007	.011	.016	.022	.029	.037	.046	.071	.103	.183					
	THROW				4-8	6-12	9-17	12-22	16-29	20-32	24-36	32-44	39-51	50-58					
5	HOR. SP					.010	.014	.020	.026	.032	.040	.063	.090	.160	.250				
	THROW					9-16	13-19	16-22	18-25	20-28	23-31	28-37	34-41	40-47	44-51				
	NC					<20	<20	<20	<20	<20	<20	26	32	41	48				
	VERT. SP					.007	.011	.014	.019	.024	.029	.046	.066	.117	.183				
	THROW					4-9	6-12	9-16	11-21	14-26	17-32	27-40	35-47	46-58	56-65				
6	HOR. SP						.010	.014	.018	.023	.028	.043	.063	.111	.174	.250			
	THROW						10-18	14-20	17-23	19-26	21-29	29-36	31-41	40-47	44-52	48-57			
	NC						<20	<20	<20	<20	<20	21	27	36	43	49			
	VERT. SP						.007	.010	.013	.016	.020	.032	.046	.081	.127	.183			
	THROW						5-9	6-13	8-16	11-20	13-25	21-36	20-43	42-58	53-65	61-71			
7	HOR. SP							.010	.013	.017	.020	.032	.046	.082	.128	.184	.250		
	THROW							11-19	14-22	17-24	19-27	24-33	29-39	38-47	44-52	48-57	52-61		
	NC							<20	<20	<20	<20	23	32	39	45	50			
	VERT. SP							.007	.010	.012	.015	.023	.034	.060	.093	.134	.183		
	THROW							5-10	7-13	9-16	11-20	16-30	24-40	39-53	49-65	59-71	66-77		
8	HOR. SP								.010	.013	.016	.024	.035	.063	.098	.141	.191	.250	
	THROW								12-20	15-23	18-25	22-31	27-37	36-47	45-52	48-57	52-61	56-66	
	NC								<20	<20	<20	<20	<20	28	35	41	46	50	
	VERT. SP								.007	.009	.011	.018	.026	.046	.071	.103	.140	.183	
	THROW								6-11	7-13	9-16	13-25	19-35	34-50	46-62	55-71	64-77	70-82	
NC								<20	<20	<20	<20	<20	<20	<20	<20	21	26	30	

Technical Data Sheet



AirQon Synergies

Linear slot diffuser with deflection blades and without volume control damper (3/4" Slot Width).

No. of Slots	Negative SP	.005	.022	.048	.086	.133	.196	.270	.354
1	CFM/Foot	10	20	30	40	50	60	70	80
	NC	<20	<20	<20	<20	25	31	36	40
2	CFM/Foot	20	40	60	80	100	120	140	160
	NC	<20	<20	<20	23	27	33	38	42
3	CFM/Foot	30	60	90	120	150	180	210	240
	NC	<20	<20	23	29	33	39	44	46
4	CFM/Foot	40	80	120	160	200	240	280	320
	NC	<20	<20	26	32	36	42	47	50
5	CFM/Foot	50	100	150	200	250	300	350	400
	NC	<20	<20	28	34	38	44	49	>50
6	CFM/Foot	60	120	180	240	300	360	420	480
	NC	<20	23	31	36	40	46	>50	>50
7	CFM/Foot	70	140	210	280	350	420	490	560
	NC	<20	23	31	37	42	48	>50	>50
8	CFM/Foot	80	160	240	320	400	480	560	640
	NC	<20	24	32	38	44	>50	>50	>50

Linear slot diffuser without deflection blades and with volume control damper (3/4" Slot Width).

No. of Slots	Negative SP	.015	.062	.134	.241	.372	.549	.756	.991
1	CFM/Foot	10	20	30	40	50	60	70	80
	NC	<20	<20	<20	22	27	32	37	42
2	CFM/Foot	20	40	60	80	100	120	140	160
	NC	<20	<20	24	32	38	43	48	>50
3	CFM/Foot	30	60	90	120	150	180	210	240
	NC	<20	<20	30	38	42	49	>50	>50
4	CFM/Foot	40	80	120	160	200	240	280	320
	NC	<20	23	34	43	48	>50	>50	>50
5	CFM/Foot	50	100	150	200	250	300	350	400
	NC	<20	26	38	46	>50	>50	>50	>50
6	CFM/Foot	60	120	180	240	300	360	420	480
	NC	<20	29	40	48	>50	>50	>50	>50
7	CFM/Foot	70	140	210	280	350	420	490	560
	NC	<20	31	43	>50	>50	>50	>50	>50
8	CFM/Foot	80	160	240	320	400	480	560	640
	NC	<20	33	45	>50	>50	>50	>50	>50

NC Data based on 10dB room attenuation.

Static Pressure (SP) in inches w.g.

Technical Data Sheet



AirQon Synergies

Linear slot diffuser without deflection blades and without volume control damper (1" Slot Width).

No. of Slots	Negative SP	.016	.034	.055	.086	.123	.161	.205	.354
1	CFM/Foot	20	30	40	50	60	70	80	100
	NC	<20	<20	<20	<20	24	27	30	35
2	CFM/Foot	40	60	80	100	120	140	160	200
	NC	<20	<20	<20	22	26	29	33	37
3	CFM/Foot	60	90	120	150	180	210	240	300
	NC	<20	<20	<20	24	28	31	34	39
4	CFM/Foot	80	120	160	200	240	280	320	400
	NC	<20	<20	<20	25	29	32	35	40
5	CFM/Foot	100	150	200	250	300	350	400	500
	NC	<20	<20	21	26	30	33	36	41
6	CFM/Foot	120	180	240	300	360	420	480	600
	NC	<20	<20	22	27	31	34	37	42
7	CFM/Foot	140	210	280	350	420	490	560	700
	NC	<20	<20	23	28	32	35	38	43
8	CFM/Foot	160	240	320	400	480	560	640	800
	NC	<20	<20	24	29	33	36	39	45

Linear slot diffuser without deflection blades and with volume control damper (1" Slot Width).

No. of Slots	Negative SP	.026	.095	.154	.240	.344	.451	.574	.991
1	CFM/Foot	20	30	40	50	60	70	80	100
	NC	<20	<20	<20	21	26	30	32	38
2	CFM/Foot	40	60	80	100	120	140	160	200
	NC	<20	<20	23	29	31	37	41	44
3	CFM/Foot	60	90	120	150	180	210	240	300
	NC	<20	<20	25	32	36	40	45	50
4	CFM/Foot	80	120	160	200	240	280	320	400
	NC	<20	22	26	34	39	43	48	>50
5	CFM/Foot	100	150	200	250	300	350	400	500
	NC	<20	24	29	36	42	45	50	>50
6	CFM/Foot	120	180	240	300	360	420	480	600
	NC	<20	26	32	39	45	49	>50	>50
7	CFM/Foot	140	210	280	350	420	490	560	700
	NC	<20	29	36	43	48	>50	>50	>50
8	CFM/Foot	160	240	320	400	480	560	640	800
	NC	<20	31	40	46	>50	>50	>50	>50