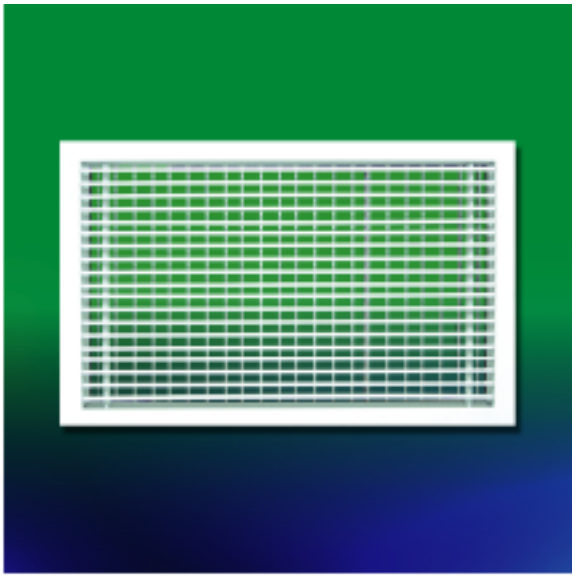
GA Supply Air Linear Bar Grille



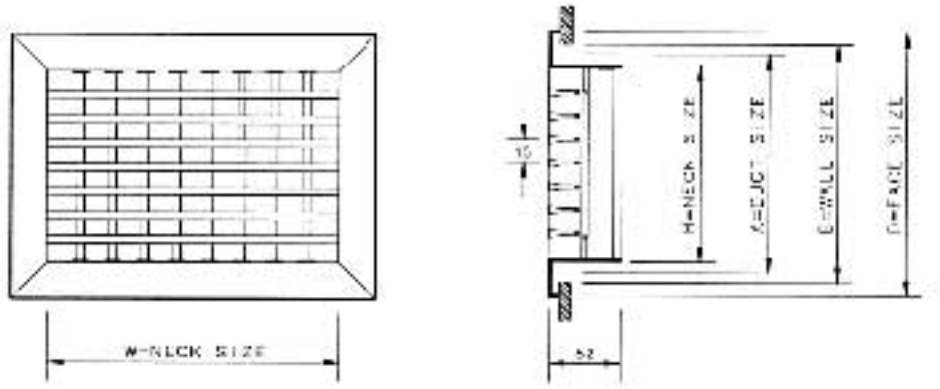
■ Materials
- GA-A Extruded aluminium A6063.

■ Surface Finish
- Baked white powder coat as standard or natural anodized.

■ Features
- Model GA is made up of two sets of air foil blades.The horizontal set is in front & the vertical set is behind.
- The horizontal set of air blades is fixed & the vertical set is adjustable.
- The grille will come in more sections for blade length that is more than 600mm.
- On-standard sizes are available.
- Approtimately 60% free area when blades are fully open.

■ Accessories
- G1 Opposed blade damper.
- G2 Volume extractor.

■ GA Construction Illustrations



■ GA Physical Dimension Unit:mm

Model	Materials	Thickness		Standard Size W x H	A Duct Size	B Wall Size	D Face Size	Order Key
		Frame	Blade					
GA-A	Extruded Aluminium A6063	1.0	4.5 3.8	400 x 150 450 x 150 500 x 150 500 x 250	W+10 H+10	W+15 H+15	W+48 H+48	GA - A + G1 - 400 x 150 Model / Materials / Accessories / W / H

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GA+G1 Opposed Blade Damper

■ Materials

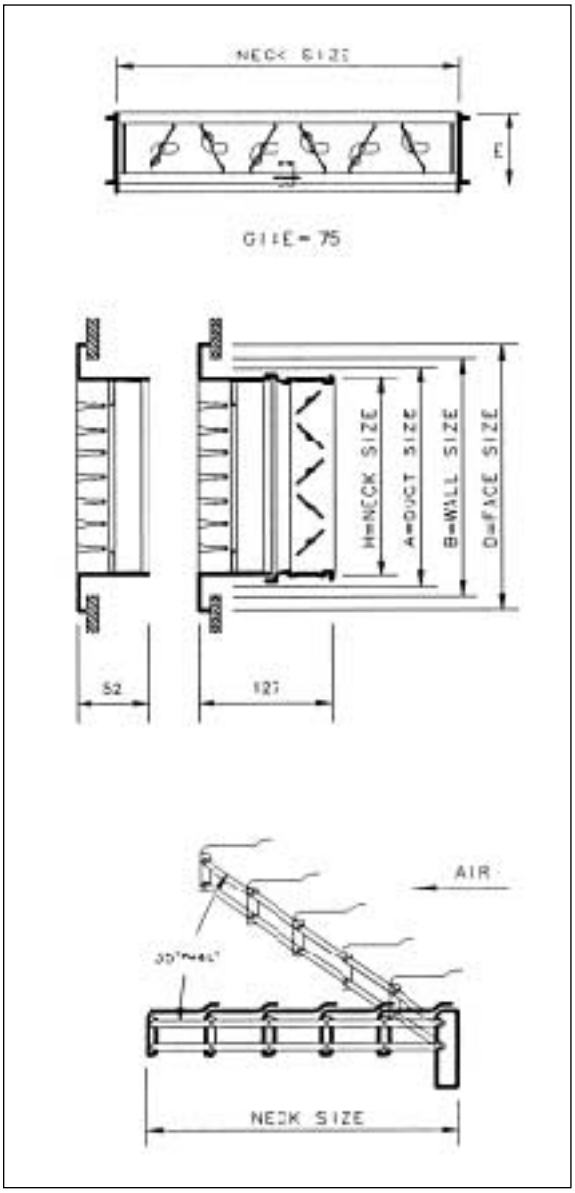
- G1-T SPGC galvanized steel.

■ Surface Finish

- G1-T Matt black as standard.
- The G1 opposed blade damper is gear operated & can be set at fully open, half open & fully close.
- G1 maximum dimension is 500mm x 500mm. Damper size bigger than this will come in sections.

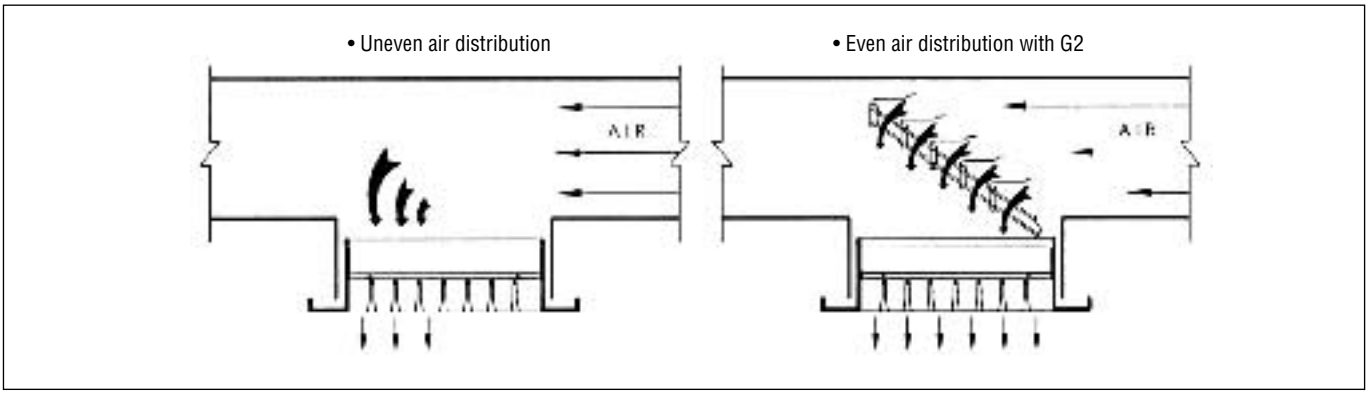
■ GH & GH+G1 Physical Dimension Unit:mm

Model	Depth		Neck Size	A Duct Size	B Wall Size	D Face Size
GA	52		W x H	W+10 H+10	W+15 H+15	W+48 H+48
GA + G1	1 A	127	W x H	W+15 H+15	W+15 H+15	W+48 H+48



GA+G2 Volume Extractor

- G2 volume extractor helps in balancing by guiding a regulated amount of air for supply air grilles from the main duct & enable even air distribution over the entire surface of grille.
- Maximum angle for G2 is 35˚ - 40˚.
- Materials for G2 is 1.0mm SPGC galvanized steel & surface finish is baked black & surface finish is baked black.



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■ GA Performance Data (1)

Neck Area m^2	Neck Size mm	Neck Vel. M/S		2	2.5	3	3.5	4	4.5	5
		Tot. Press (mmAq)		0.9	1.2	1.8	2.3	3.0	4.0	4.8
0.045	450 x 100 300 x 150	CMH		324	405	486	567	648	729	810
		Throw (m)	Ceiling	2.3 - 4.1	2.9 - 4.5	3.6 - 5.0	3.9 - 5.6	4.2 - 6.1	4.6 - 6.6	5.0 - 7.1
			Wall	4.3 - 7.5	5.2 - 8.3	6.5 - 8.8	7.0 - 9.4	7.3 - 10.6	8.1 - 11.2	8.3 - 11.8
		NC		-	-	21	25	27	32	37
0.06	400 x 150 300 x 200	CMH		432	540	648	756	864	972	1080
		Throw (m)	Ceiling	2.5 - 4.6	3.4 - 5.2	4.1 - 6.1	4.7 - 6.7	5.3 - 7.4	5.7 - 8.0	6.1 - 8.3
			Wall	4.6 - 8.5	6.3 - 9.5	7.5 - 10.6	8.4 - 11.3	9.0 - 12.4	9.5 - 13.0	10.0 - 13.6
		NC		-	-	21	26	29	32	37
0.075	500 x 150 300 x 250	CMH		540	675	810	945	1080	1215	1350
		Throw (m)	Ceiling	2.8 - 5.3	3.9 - 6.3	4.9 - 7.1	5.5 - 7.7	5.8 - 8.3	6.3 - 8.9	6.9 - 9.5
			Wall	5.3 - 9.8	7.1 - 11.2	8.4 - 12.0	9.2 - 12.6	9.7 - 13.6	10.3 - 14.4	10.9 - 15.2
		NC		-	-	22	26	31	33	38
0.09	300 x 300 450 x 200	CMH		648	810	972	1134	1296	1459	1620
		Throw (m)	Ceiling	3.5 - 6.2	4.6 - 7.0	5.5 - 7.8	6.1 - 8.4	6.5 - 9.5	7.1 - 10.3	7.6 - 11.0
			Wall	6.1 - 10.5	7.6 - 11.9	9.2 - 12.7	10.0 - 13.8	10.6 - 15.0	11.5 - 16.0	12.0 - 16.9
		NC		-	-	22	27	31	35	38
0.1	500 x 200 400 x 250	CMH		720	900	1080	1260	1440	1620	1800
		Throw (m)	Ceiling	4.0 - 6.8	5.1 - 7.6	6.2 - 8.6	6.9 - 9.4	7.6 - 10.2	8.1 - 11.1	8.8 - 12.0
			Wall	6.8 - 11.4	8.2 - 12.5	10.0 - 14.0	10.8 - 14.9	11.8 - 15.8	12.3 - 16.9	13.0 - 18.0
		NC		-	-	23	28	31	36	39
0.12	400 x 300 600 x 200	CMH		864	1080	1296	1512	1728	1944	2160
		Throw (m)	Ceiling	4.3 - 7.4	5.3 - 8.4	6.5 - 9.5	7.4 - 10.4	8.1 - 11.3	8.8 - 12.2	9.3 - 12.9
			Wall	7.2 - 12.4	9.0 - 13.8	10.9 - 15.1	11.7 - 16.5	12.6 - 17.6	13.5 - 18.6	14.0 - 19.5
		NC		-	-	24	29	33	36	39
0.135	450 x 300 550 x 250	CMH		972	1215	1458	1700	1944	2187	2430
		Throw (m)	Ceiling	4.5 - 7.9	5.6 - 8.9	6.7 - 10.2	7.7 - 11.2	8.6 - 12.2	9.3 - 13.0	9.8 - 13.8
			Wall	7.5 - 13.2	9.4 - 14.7	11.3 - 16.0	12.5 - 17.4	13.4 - 18.5	14.2 - 19.7	14.8 - 20.7
		NC		-	-	24	30	34	36	39
0.15	500 x 300 600 x 250	CMH		1080	1350	1620	1890	2160	2430	2700
		Throw (m)	Ceiling	4.8 - 8.6	6.1 - 9.5	7.3 - 10.9	8.3 - 11.6	9.1 - 12.8	9.8 - 13.8	10.5 - 14.8
			Wall	7.7 - 13.8	9.5 - 15.4	11.7 - 17.0	13.0 - 18.2	13.8 - 19.3	14.6 - 20.7	15.3 - 21.6
		NC		-	-	25	30	34	37	39
0.165	550 x 300 650 x 250	CMH		1188	1485	1782	2079	2376	2673	2970
		Throw (m)	Ceiling	5.1 - 9.1	6.4 - 10.1	7.7 - 11.4	8.7 - 12.4	9.7 - 13.5	10.4 - 14.6	11.1 - 15.7
			Wall	5.2 - 14.6	10.2 - 16.1	12.4 - 17.6	13.5 - 19.0	14.6 - 20.4	15.1 - 21.5	16.2 - 22.8
		NC		-	21	25	31	35	37	39

- Throw is based on terminal velocities of 0.5 m/s - 0.25 m/s respectively.
- NC value is based on a room absorption of 10 dB, re 10^{-12} watts.
- Dash (-) in space indicates NC value less than 20.
- With G1 damper, the pressure loss is 1.136P, and add 2 for NC value.

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■ GA Performance Data (2)

Neck Area m^2	Neck Size mm	Vel. M/S		2	2.5	3	3.5	4	4.5	5
		Tot. Press (mmAq)		0.9	1.2	1.8	2.3	3.0	4.0	4.8
0.18	600 x 300 700 x 250	CMH		1296	1620	1944	2268	2592	2915	3240
		Throw (m)	Ceiling	5.3 - 9.5	6.5 - 10.8	7.9 - 12.1	9.0 - 13.2	10.2 - 14.3	11.0 - 15.6	12.0 - 16.9
			Wall	8.5 - 15.2	10.7 - 16.9	12.7 - 18.3	14.2 - 19.8	15.2 - 21.3	16.2 - 22.5	16.9 - 23.8
		NC		-	21	25	31	35	38	40
0.195	650 x 300 550 x 350	CMH		1405	1755	2105	2457	2808	3160	3510
		Throw (m)	Ceiling	5.8 - 10.1	7.3 - 11.4	8.7 - 12.6	9.7 - 13.9	10.8 - 15.1	11.7 - 16.4	12.6 - 17.6
			Wall	9.1 - 15.8	11.2 - 17.2	13.2 - 19.0	14.7 - 20.7	15.8 - 22.1	16.8 - 23.5	17.7 - 24.9
		NC		-	21	25	31	35	38	40
0.21	700 x 300 1000 x 200	CMH		1512	1890	5568	2646	3024	3402	3780
		Throw (m)	Ceiling	6.1 - 10.6	7.8 - 11.8	9.3 - 13.1	10.3 - 14.5	11.3 - 15.9	12.3 - 17.2	13.3 - 18.5
			Wall	9.6 - 16.5	11.6 - 18.1	14.0 - 19.7	15.3 - 21.5	16.6 - 23.3	17.5 - 24.5	18.7 - 26.0
		NC		-	21	26	31	35	38	41
0.225	750 x 300 900 x 250	CMH		1620	2025	2430	2835	3240	3645	4050
		Throw (m)	Ceiling	6.5 - 11.1	8.3 - 12.5	9.6 - 13.8	11.0 - 15.5	12.2 - 16.9	13.3 - 18.2	14.2 - 19.8
			Wall	10.0 - 17.1	12.1 - 18.6	14.5 - 20.5	16.0 - 22.4	17.2 - 24.0	18.0 - 25.6	19.3 - 26.9
		NC		-	22	26	31	36	39	41
0.24	850 x 300	CMH		1728	2160	2592	3024	3456	3888	4320
		Throw (m)	Ceiling	6.7 - 11.4	8.5 - 13.0	10.2 - 14.3	11.4 - 16.0	12.5 - 17.7	13.6 - 19.2	14.7 - 20.4
			Wall	10.2 - 17.5	12.5 - 19.5	14.8 - 21.1	16.6 - 23.1	17.6 - 24.7	18.6 - 26.3	19.9 - 27.7
		NC		-	22	26	32	36	39	41
0.255	850 x 300	CMH		1836	2295	2754	3213	3672	4130	4590
		Throw (m)	Ceiling	6.9 - 11.8	8.6 - 13.4	10.4 - 15.0	11.6 - 16.6	12.9 - 18.2	14.3 - 20.0	15.1 - 21.1
			Wall	10.4 - 18.0	12.9 - 20.0	15.2 - 21.9	17.3 - 23.8	18.2 - 25.5	19.3 - 27.0	20.5 - 28.5
		NC		-	22	27	32	36	39	41
0.27	900 x 300	CMH		1944	2430	2915	3402	3888	4374	4860
		Throw (m)	Ceiling	7.0 - 12.3	8.9 - 14.0	10.7 - 15.7	21.1 - 17.4	13.3 - 19.1	14.7 - 20.6	15.5 - 21.7
			Wall	10.5 - 18.4	13.0 - 20.6	15.6 - 22.6	17.5 - 24.5	18.7 - 26.5	19.6 - 27.9	21.0 - 29.3
		NC		-	22	27	32	36	39	42
0.3	1000 x 300	CMH		2160	2700	3240	3780	4320	4860	5400
		Throw (m)	Ceiling	7.3 - 12.9	9.3 - 14.8	11.3 - 16.9	13.0 - 18.4	14.2 - 20.2	15.5 - 21.7	16.6 - 23.0
			Wall	11.0 - 19.5	13.6 - 21.7	16.4 - 24.0	18.6 - 26.0	19.9 - 27.2	21.0 - 29.5	22.5 - 31.1
		NC		-	23	28	32	37	40	43
0.32	800 x 400	CMH		2304	2880	3456	4032	4608	5184	5760
		Throw (m)	Ceiling	7.5 - 13.2	9.5 - 15.2	11.5 - 17.5	13.3 - 19.4	14.4 - 21.4	15.8 - 22.1	17.0 - 23.7
			Wall	11.4 - 19.9	14.1 - 22.2	16.7 - 24.7	18.9 - 26.9	20.2 - 28.7	21.7 - 30.5	23.0 - 32.0
		NC		-	23	28	32	37	40	43

- Throw is based on terminal velocities of 0.5 m/s - 0.25 m/s respectively.
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- With G1 damper, the pressure loss is 1.136P, and add 2 for NC value.