



T03/02856C

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**CHAN CHUAN CHANG METAL WORKS**

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Reg. No. 204949/00M



## BAR GRILLES



**Brand : CCC**

**AIR DIFFUSION EQUIPMENT**

**BAR GRILLE**

**Series : CCC-BG**

## CHAN CHUAN CHANG METAL WORKS



### VISION

“To produce high quality products, high standard of creativity in design and excellent credibility in reputation”

### MISSION

“Serve customer with satisfactory and reliable works and products”

Chan Chuan Chang Metal Works was established in 1975, committed to the vision to manufacture good quality Air Diffusion Equipment. After building up its reputation in the industry as a top manufacturer, the company registered the logo with the Registry of Trade and Patents (Singapore). From then onwards, all equipment which has the trade mark symbolise our commitment to serve our customer with satisfactory and reliable works and products.


Our products have been tested by VIPAC, testing laboratory at Victorian technology Centre, Port Melbourne, Victoria. Furthermore, the results are NATA Certified (National Association of Testing Authorities, Australia) to ADC 10623 R3 (Air Diffusion Council, USA) and are officially endorsed in countries which are signatories to the I.L.A.C agreement-namely, Australia, New Zealand, Britain, USA and Malaysia.

We were proud to introduce the **Heavy Duty Aluminium Computer Floor Grille**, Series : CR to the industry in 1991. This has been a breakthrough as the grille are able to provide adequate air flow whilst maintaining the weight of any person or equipment. This is verified by the Comprehensive Loading Test performed by Singapore Institute of Standard & Industrial Research (SISIR), currently known as Spring Singapore. Series : CR has since then been installed in many computer rooms, wafer manufacturing plant and places which require the product.



### COMPANY MILESTONE

**1975** Established with the vision to manufacture high quality Air Diffusion Equipment to meet future needs and demands. Together with a team of experienced Engineers & Craftsman dedicated to Chan Chuan Chang's Motto – Commitment, Creativity & Credibility, we produced good quality products with high standard of creativity in design and maintained excellent credibility in reputation.

**1982** Registered with the Registry of Trade and Patents (Singapore), CCC Trade Mark  has since become a household name in its industry.

**1986** Chan Chuan Chang (CCC) products are tested by VIPAC, a testing laboratory at Victorian Technology Centre, Port Melbourne, Victoria. These results are NATA Certified (National Association of Testing Authorities, Australia) to ADC 10623 R3 (Air Diffusion Council, USA) and are officially endorsed in countries which are signatories to the I.L.A.C agreement – namely, Australia, New Zealand, Britain, USA and Malaysia.

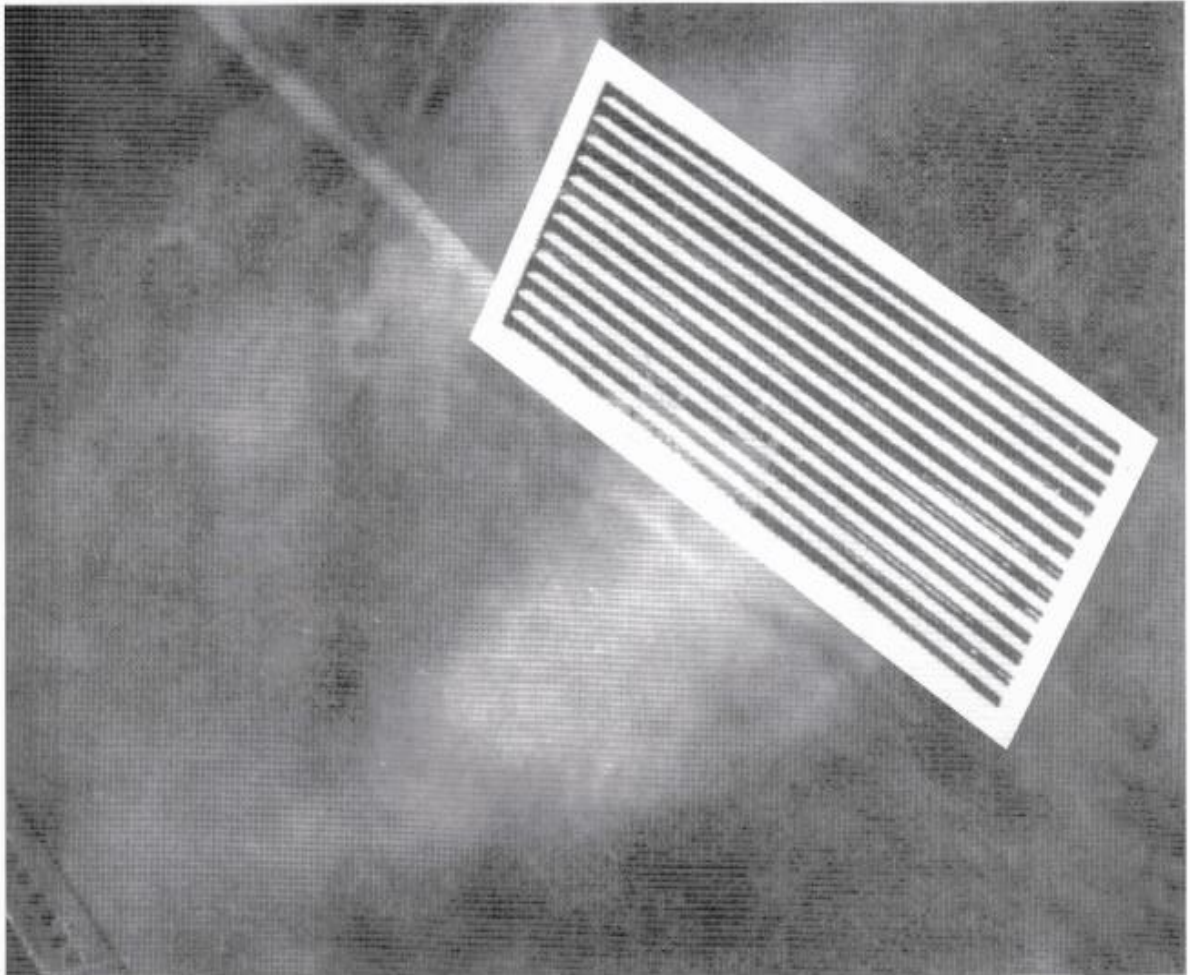
**1991** CCC Aluminium Computer Floor Air Grille was sent for Comprehensive Loading Test conducted by Singapore Institute of Standard & Industrial Research (SISIR) and achieved excellent results.

**1997** CCC was awarded ISO 9002 Certification. Our impressive list of satisfied clients is testimony to CCC's motto – Commitment, Creativity and Credibility.

**2005** CCC has improved its quality management system with respect to the ISO 9001:2000 standard due to our commitment towards quality improvement in our products and customer satisfaction. We thank you for your faith and support in our products. We will continue to strive harder to exceed your demand & satisfaction.

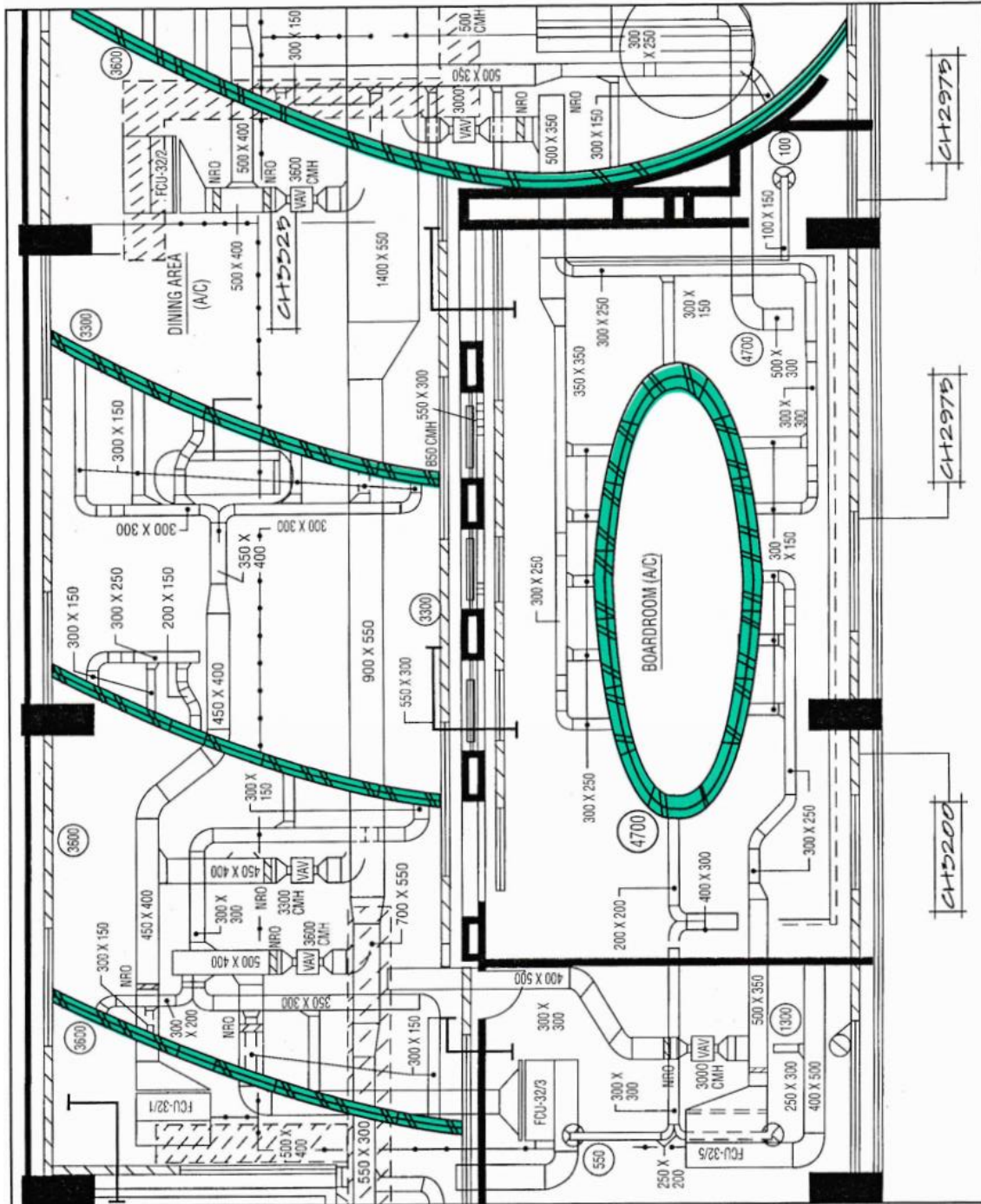
**2012** CCC was awarded ISO 9001:2008 Certification by BVQI Accreditation. CCC also became a certified member of Air Movement and Control Association International (AMCA). Our Low Leakage dampers were tested according to AMCA standards and received certifications.

## BAR GRILLES



Installed Bar Grille in Laboratory for testing.  
Wall is painted black to facilitate witnessing smoke pattern.

### Architectural Design Which Incorporated Series BG Grilles



RE: CAPITOL TELECOM AT HILL STREET  
SPECIAL MADE CURVE TYPE ALUMINIUM BAR GRILLE C/W CONTROL DAMPER AND PLENUM BOX WITH  
INTERNAL INSULATION & 8" Ø COLLAR OPENING  
FINISHING: WHITE POWDER COATING



Model No.: BG/01



Model No.: BG/02

**Description**

- These grilles are designed for supply and return air applications.
- They are attractively designed to blend with any architectural features and they are usually installed on the side wall.
- The grilles are manufactured from high quality extruded aluminium and the straight bars ensure possible good vertical pattern of air at the minimum noise levels and pressure drops.
- Series BG grilles are available in two design categories:
  - a. BG/01 – with support frame
  - b. BG/02 – frameless support

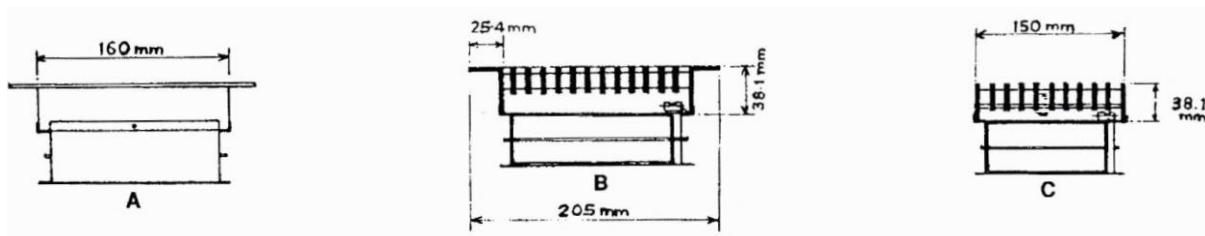
- Standard finishing is in white powder coating. Other colour may be available upon request.

**Optional Accessories (chargeable)**

- Other optional accessories such as Opposed Blade Damper, Plenum Box & adapter Collar are available upon request.
- Materials such as SS304 and SS316 are available upon request.
- Other colour finishing may be available upon request.

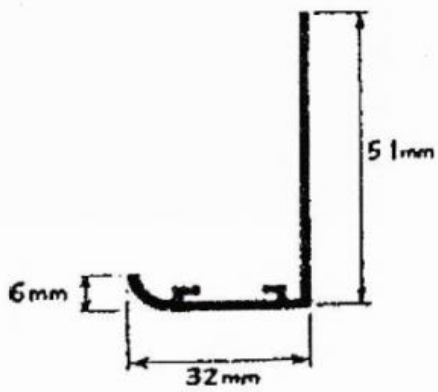
**Other Features**

- Suggestions are also available on request from your CCC Specialist.

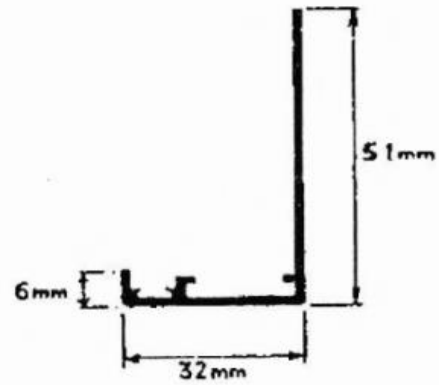


## Frame Style

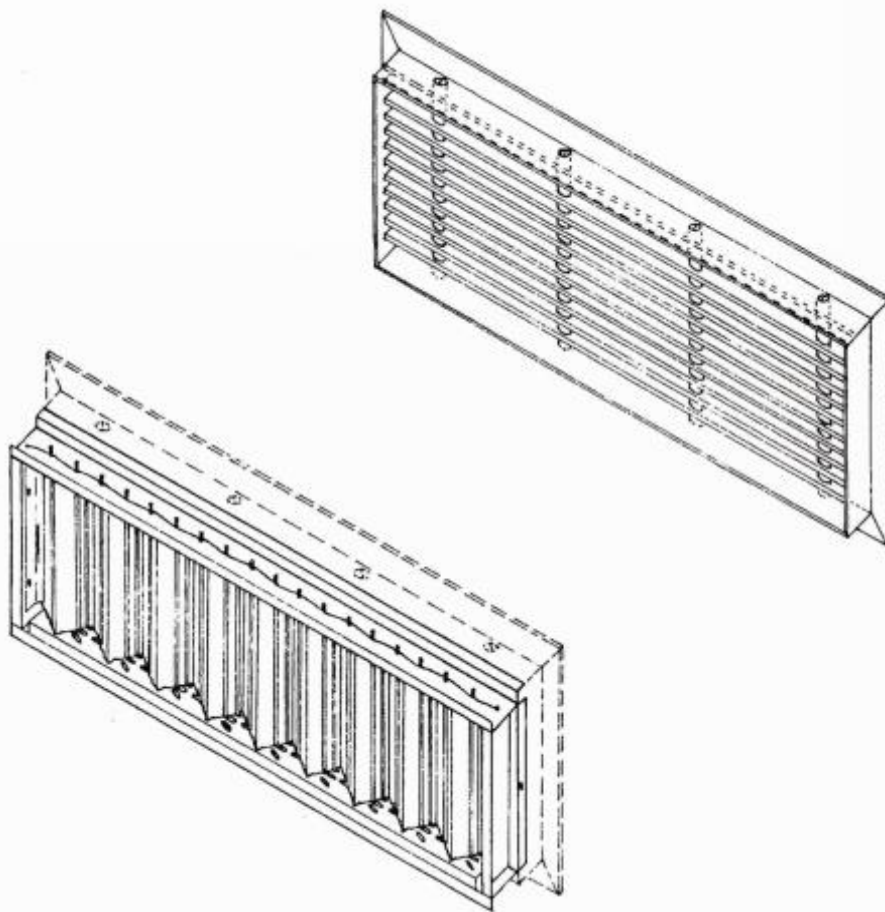
### BG/01



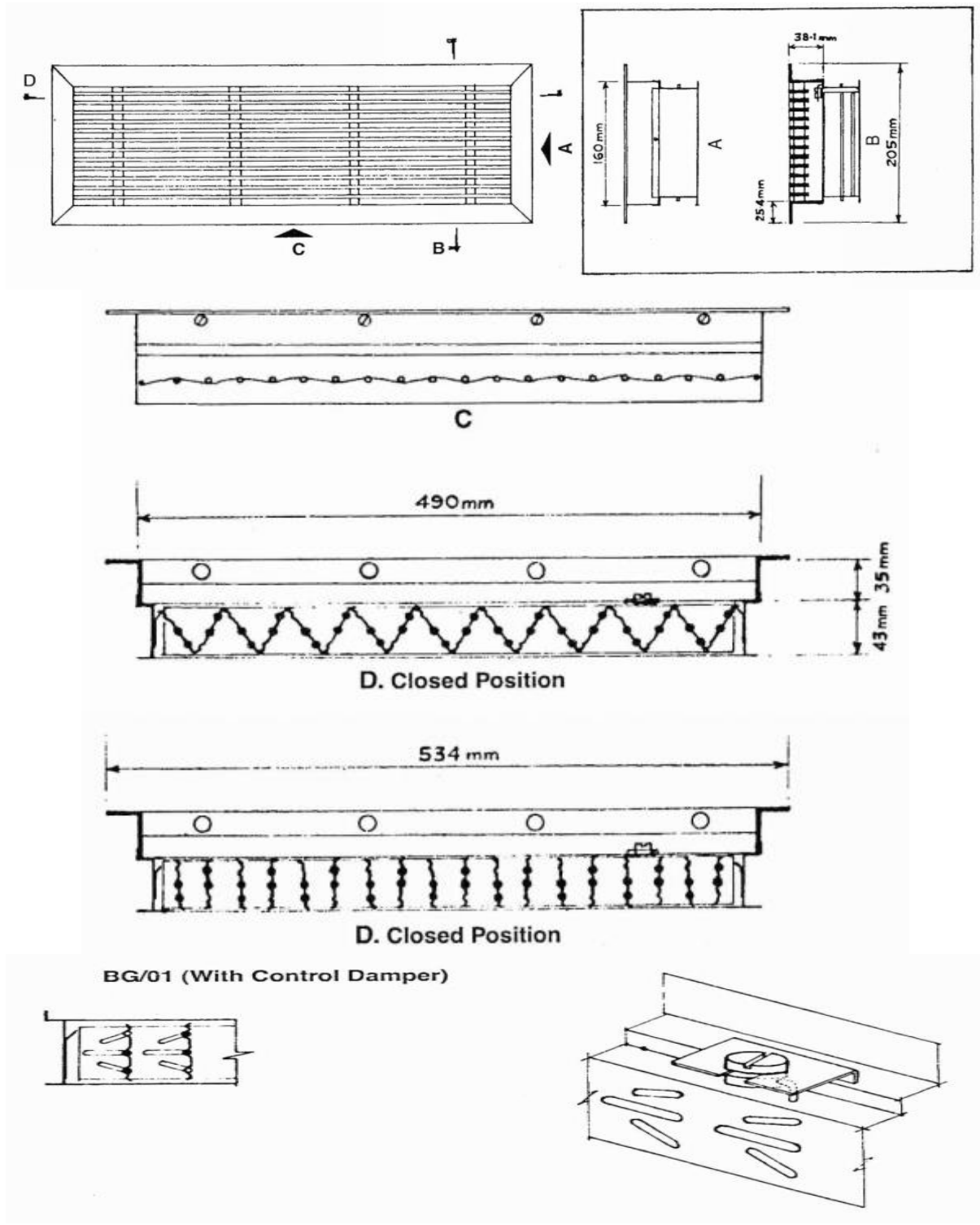
BG/F01A



BG/F01B

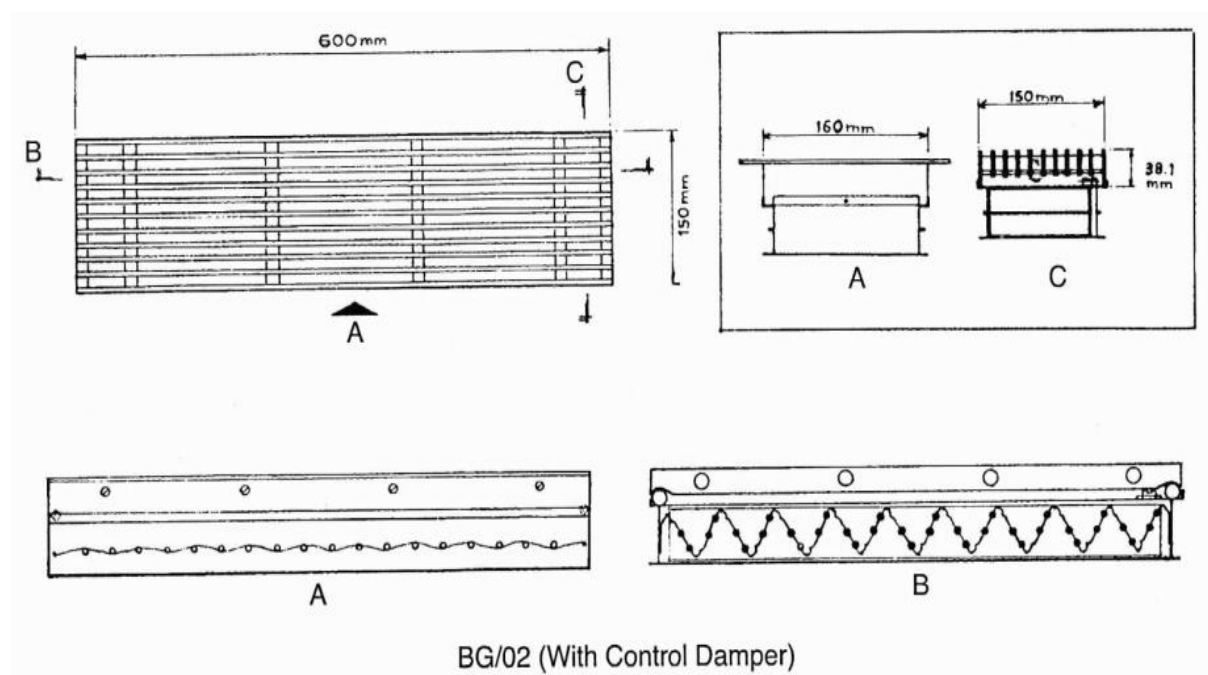
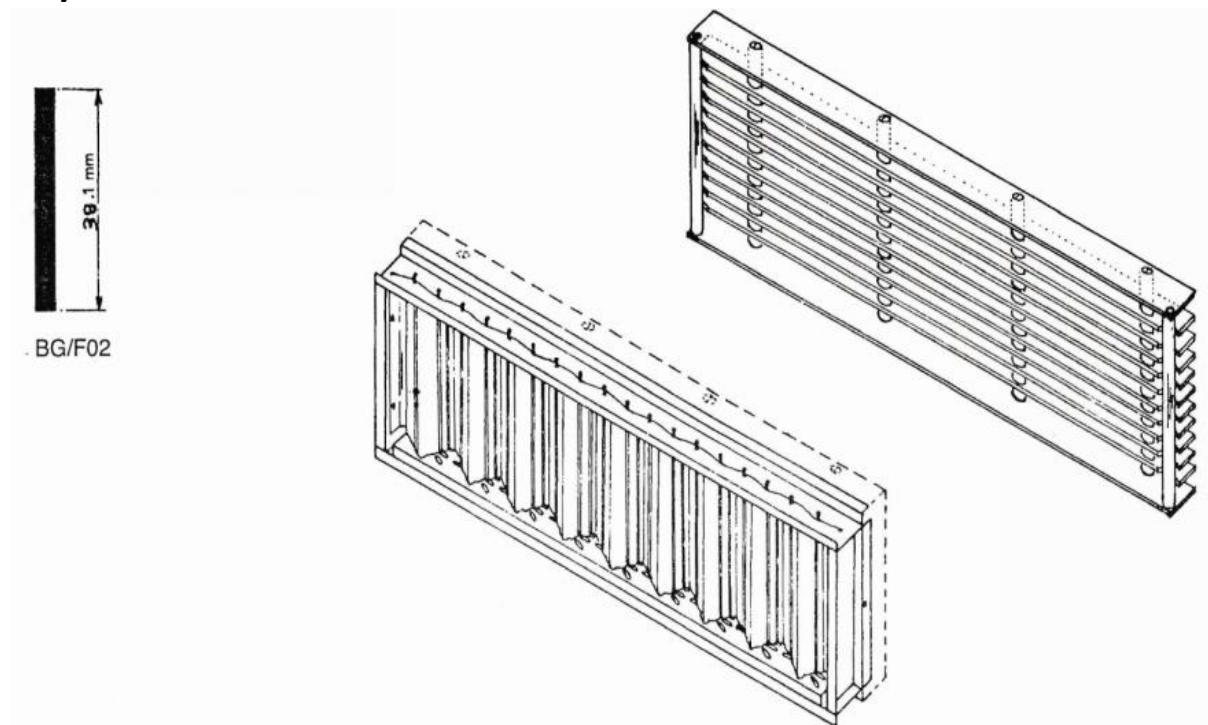


**Frame Style**  
**BG/01**





## Frame Style BG/02



**Technical Performance Data**

**Series: BG**



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**Notes :**

The performance data show Airflow, pressure drop sound levels and throws for each size of the product.  
The throws are established to a terminal velocity of 0.5m/s (100 fpm) and are in metres.  
Pressure drops are shown as total pressure in Pascals(Pa).  
Sound Levels are presented as Noise Ratings(N.R.) in dB, including a 6 db room absorption.

Size (mm)	Air flow c/s	40	50	60	70	80	90	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	
1200X300	S.P(pa) NR(dB) THROW(m)										1.6 1.3 2.2	2.0 1.6 3.0	3.1 2.1 4.0	4.0 2.4 5.5	6.0 2.9 6.9	9.0 3.3 8.0	12 36 9.0	14 41 10.6	19 45 12.2	30 50 14.1	40 54 16.0	
1000X200	S.P(pa) NR(dB) THROW(m)								2.0 1.0 2.3	3.5 1.7 3.9	5.0 2.3 4.8	8.0 2.5 6.0	13 3.0 7.5	15 3.0 8.2	18 3.7 9.6	26 4.1 11.0	32 45 12.0	50 50 14.5	62 53 15.0			
200X400	S.P(pa) NR(dB) THROW(m)				3.1 5.8 2.0	4.0 8.3 2.5	5.0 1.4 3.0	7.5 2.5 3.7	15 2.5 5.2	30 3.5 7.2	43 4.0 8.0	73 4.5 9.5	100 4.5 10.5	105 5.2 12.0								
400X350	S.P(pa) NR(dB) THROW(m)								2.0 5.0 1.8	2.5 8.0 2.0	6.0 1.5 4.0	12 2.4 5.5	20 3.5 8.0	33 4.0 9.0	45 5.0 11.0	80 5.4 13.0						
500X400	S.P(pa) NR(dB) THROW(m)								1.9 9 2.0	3.5 1.7 3.8	5.0 2.1 4.6	8.0 2.5 7.2	13 2.9 9.0	15 3.4 10.0	18 3.7 11.0	26 4.2 10.8	32 4.5 12	50 49 14.0	62 56 15.0			
600X200	S.P(pa) NR(dB) THROW(m)								5.0 1.5 2.0	12 2.4 5.5	16 2.9 6.5	20 3.5 7.8	33 3.9 9.0	45 4.3 10.0	60 5.0 11.0	80 5.4 12.4						
600X300	S.P(pa) NR(dB) THROW(m)								2.2 1.0 2.1	4.3 1.8 4.2	7.0 2.3 5.0	10 2.7 6.2	14 3.2 7.4	18 3.6 8.2	23 4.0 9.8	36 4.3 11.2	47 46 12.8	54 52 14.2				
900X400	S.P(pa) NR(dB) THROW(m)										1.6 1.3 2.5	2.0 1.6 3.0	3.1 2.1 4.0	4.0 2.5 5.6	6.0 3.0 6.8	9.0 3.3 8.0	12 36 9.0	14 41 10.6	19 45 12.2	30 50 14.0	40 54 16.0	
800X100	S.P(pa) NR(dB) THROW(m)				3.0 6.0 1.9	3.8 8.0 2.2	5.0 1.4 3.0	7.3 2.5 3.5	15 2.4 5.0	28 3.4 7.0	43 4.0 8.0	70 4.3 9.0	100 4.5 10.5	110 5.2 11.6								
900X200	S.P(pa) NR(dB) THROW(m)								2.2 1.0 2.1	4.3 1.8 4.2	7.0 2.3 5.0	10 2.7 6.2	14 3.2 7.4	18 3.6 8.2	23 4.0 9.8	36 4.3 11.2	47 46 12.8	54 52 14.2				

## OPTIONAL ACCESSORIES

These are some of our optional accessories for your references:



### Opposed-Blade Damper

To vary and control the supply air volume providing a sustained discharge velocity throughout the volume range.



### Fan-Type Damper

To vary and control the supply air volume providing a sustained discharge velocity throughout the volume range.



### Reflector

To control the direction of the air flow



### Plenum Box

A junction to join various ducts. It is a closed space space inteded to store air and also helps to reduce noise level of the airflow.