# CHAN CHUAN CHANG METAL WORKS

CCC-PN JET NOZZLE **DETAILS & DESCRIPTIONS** 



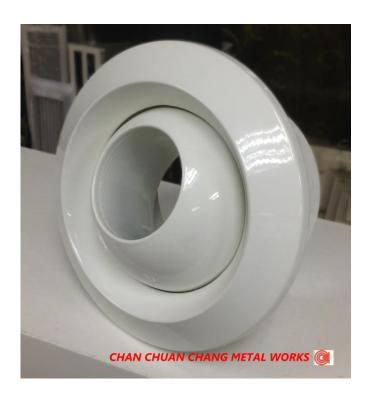






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# **JET NOZZLE**



**Brand: CCC** 

# **AIR DIFFUSION EQUIPMENT JET NOZZLE**

Series: CCC-PN

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## **CHAN CHUAN CHANG METAL WORKS**

Address: Blk 5055 Ang Mo Kio Industrial Park 2 #01-1141 Singapore 569558

# 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.









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#### CHAN CHUAN CHANG METAL WORKS

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### **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 became 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.

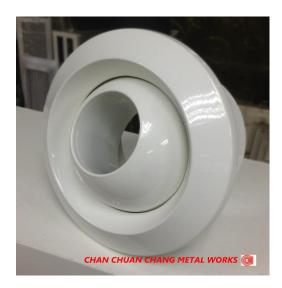
**2012** CCC was awarded ISO 9001:2008 Certification by BVQI Accreditation. CCC also became a certified member of Air Movement and Control Association International (AMCA). Our Low Leakage dampers were tested according to AMCA standards and received certifications.

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## **JET NOZZLE**





**CCC-PN** 

### **Applications:**

- CCC Jet Nozzle is used for area that requires long distance air throw with low noise ratings.
- Areas that has large and high ceilings, such as concert halls, theatres, museum, airports, shopping centres etc.

### **Features:**

This series is designed for heating and cooling in large and high areas where high air projection ability are required to facilitate the air flow such as theatres, concert halls, museum, airport, shopping centres etc.

The aerodynamic design of the diffuser are able to provide a long throw even at high outlet velocities and reduced noise levels.

CCC Jet Nozzle is adjustable manually, rotating in any direction to facilitate your airflow.

This series can be wall or exposed duct mounted.

It is constructed in high quality aluminium material and white powder coating finishing.

Designed for Large & High areas, giving a long throw And reduced noise levels.

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CHAN CHUAN CHANG METAL WORKS

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# **JET NOZZLE**



Elegant design to match your wall or exposed duct mounting.

Adjustable centre ball to faciliate your direction of airflow.



## **Optional Accessories (chargeable):**

- Other colours available upon request.
- Fan-Type Damper
- Collar Adaptors
- Gasket Foams
- Rubber Seals

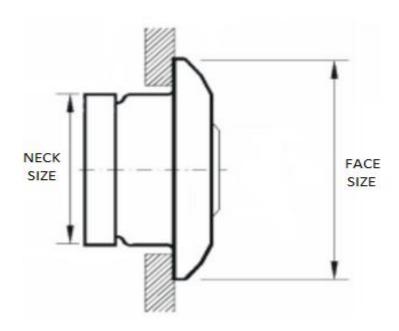
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## CHAN CHUAN CHANG METAL WORKS

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DETAILS & DESCRIPTIONS

# **DRAWINGS & SIZES**



| TYPE | NECK SIZE (ø<br>MM) | FACE SIZE (Ø MM) | AIR VOLUME<br>(m³/h) | THROW (m) |
|------|---------------------|------------------|----------------------|-----------|
| 1    | 158                 | 227              | 706                  | 19.9      |
| 2    | 198                 | 267              | 1108                 | 24        |
| 3    | 248                 | 317              | 1739                 | 29.3      |
| 4    | 313                 | 382              | 2770                 | 35.5      |
| 5    | 398                 | 467              | 4479                 | 44        |
| 6    | 498                 | 567              | 7012                 | 53.6      |

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## **CHAN CHUAN CHANG METAL WORKS**

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# **PERFORMANCE DATA**

| Туре | Air Velocity (m/s) | 1   | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
|------|--------------------|-----|------|------|------|------|------|------|------|------|------|
|      |                    |     | •    |      | •    |      |      |      | •    | •    | •    |
| 1    | Air Volume (CMH)   | 71  | 141  | 212  | 282  | 353  | 423  | 494  | 565  | 635  | 706  |
|      | Pressure Loss (Pa) | 8.1 | 32   | 71   | 132  | 201  | 290  | 429  | 508  | 650  | 775  |
|      | Throw (m)          | 5   | 5.1  | 7.6  | 9.9  | 10.8 | 11.8 | 13.9 | 16.1 | 17.7 | 19.9 |
|      |                    |     |      |      |      |      |      |      |      |      |      |
| 2    | Air Volume (CMH)   | 111 | 222  | 333  | 443  | 554  | 665  | 776  | 887  | 998  | 1108 |
|      | Pressure Loss (Pa) | 7.9 | 31   | 69.5 | 128  | 193  | 282  | 415  | 490  | 637  | 768  |
|      | Throw (m)          | 4   | 6.8  | 9.1  | 11.3 | 12.7 | 14.1 | 17   | 19.1 | 21.2 | 24   |
|      |                    |     |      |      |      |      |      |      |      |      |      |
| 3    | Air Volume (CMH)   | 174 | 348  | 522  | 696  | 869  | 1043 | 1217 | 1391 | 1565 | 1739 |
|      | Pressure Loss (Pa) | 7.5 | 30   | 67.5 | 120  | 188  | 270  | 368  | 480  | 608  | 750  |
|      | Throw (m)          | 5.1 | 8.5  | 11.5 | 14.2 | 16   | 17.8 | 20.5 | 24   | 26.7 | 29.3 |
|      |                    |     |      |      |      |      |      |      |      |      |      |
| 4    | Air Volume (CMH)   | 277 | 554  | 831  | 1108 | 1385 | 1662 | 1939 | 2216 | 2493 | 2770 |
|      | Pressure Loss (Pa) | 6.9 | 28   | 62   | 109  | 177  | 231  | 335  | 446  | 562  | 618  |
|      | Throw (m)          | 5   | 805  | 13.4 | 16.4 | 18.7 | 21.1 | 25.5 | 28.9 | 32.3 | 35.5 |
|      |                    |     |      |      |      |      |      |      |      |      |      |
| 5    | Air Volume (CMH)   | 448 | 896  | 1344 | 1791 | 2239 | 2687 | 3135 | 3583 | 4031 | 4479 |
|      | Pressure Loss (Pa) | 6   | 24   | 54   | 96   | 150  | 216  | 294  | 384  | 486  | 600  |
|      | Throw (m)          | 6.6 | 11.3 | 16   | 20   | 23.2 | 26.4 | 30.8 | 35.2 | 39.6 | 44   |
|      |                    |     |      |      |      |      |      |      |      |      |      |
| 6    | Air Volume (CMH)   | 701 | 1402 | 2104 | 2805 | 3506 | 4207 | 4908 | 5610 | 6311 | 7012 |
|      | Pressure Loss (Pa) | 5.8 | 22   | 46   | 89   | 143  | 210  | 261  | 346  | 424  | 550  |
|      | Throw (m)          | 8.6 | 14.7 | 18.5 | 23.9 | 28.3 | 32.5 | 36.4 | 42.1 | 47.9 | 53.6 |
|      | <u> </u>           |     |      |      |      |      |      |      |      |      |      |

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