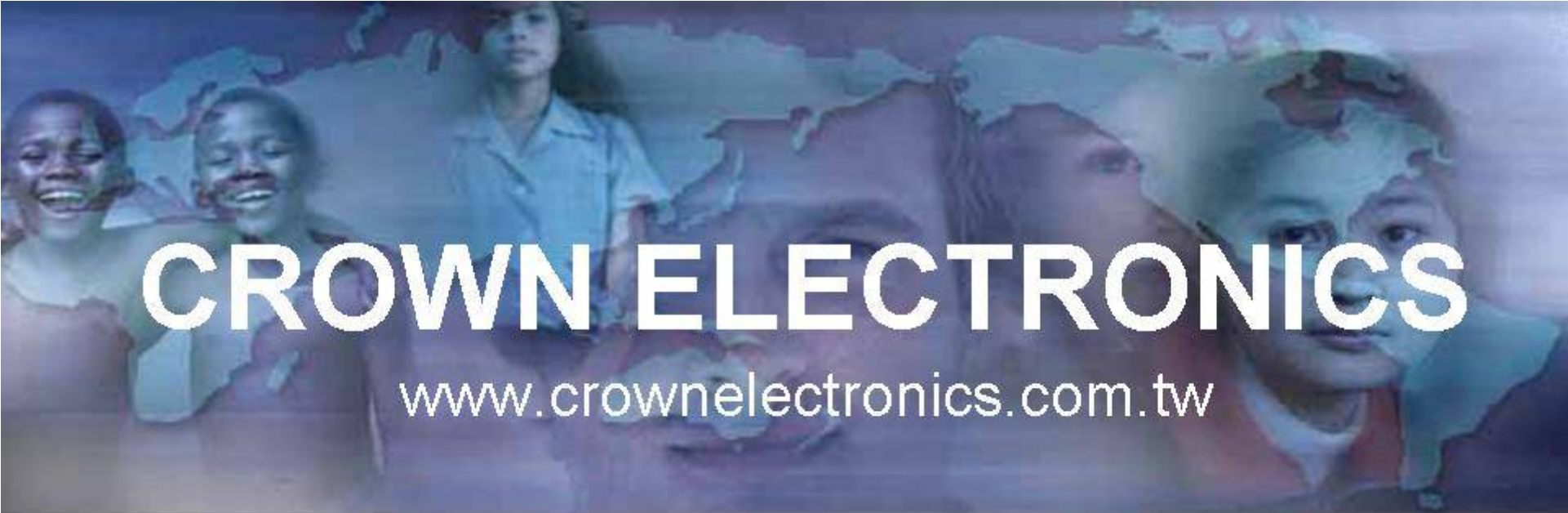




CROWN ELECTRONICS

www.crownelectronics.com.tw

CROWN PRESENTATION

2008.03



Who is CROWN?

Founded in 2001, CROWN dedicate to becoming the professional fan manufacturer. CROWN has supplied dependable, quality DC and AC fan motors to OEMs around the world. Products of Crown DC fan are widely applied in the telecommunications, networking, office automation, home electronics, medical and industrial sectors.

- 2001 CROWN is founded and Sell branded fan with CROWN
- 2002 Factory is certified with ISO9001
- 2002 Became OEM of one of the most famous Japanese maker
- 2003 Set tooling center and make plastic injection tooling



FACTORY



Winding



Impeller Balancing



Rotor assembling



SMT

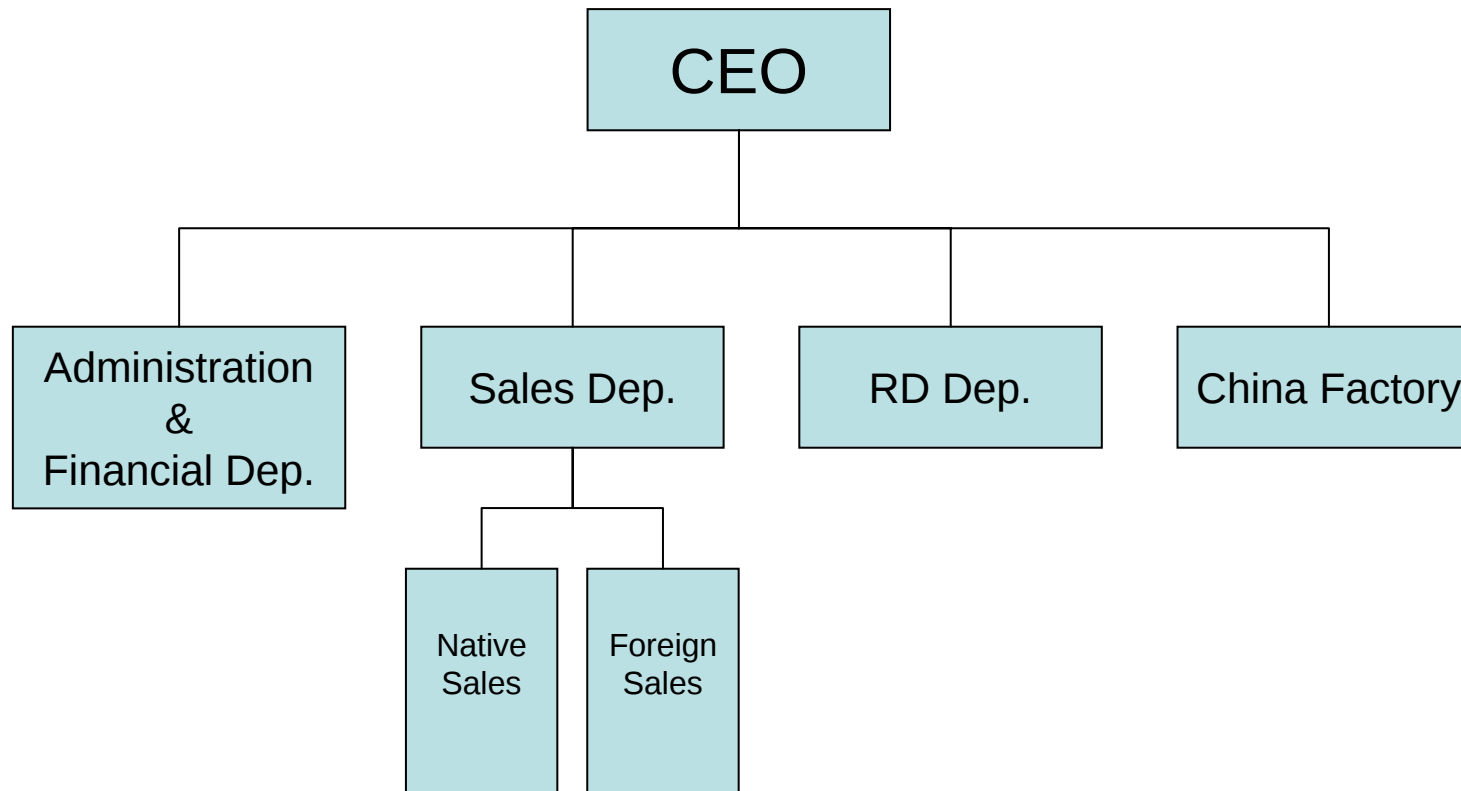


Final Assembling

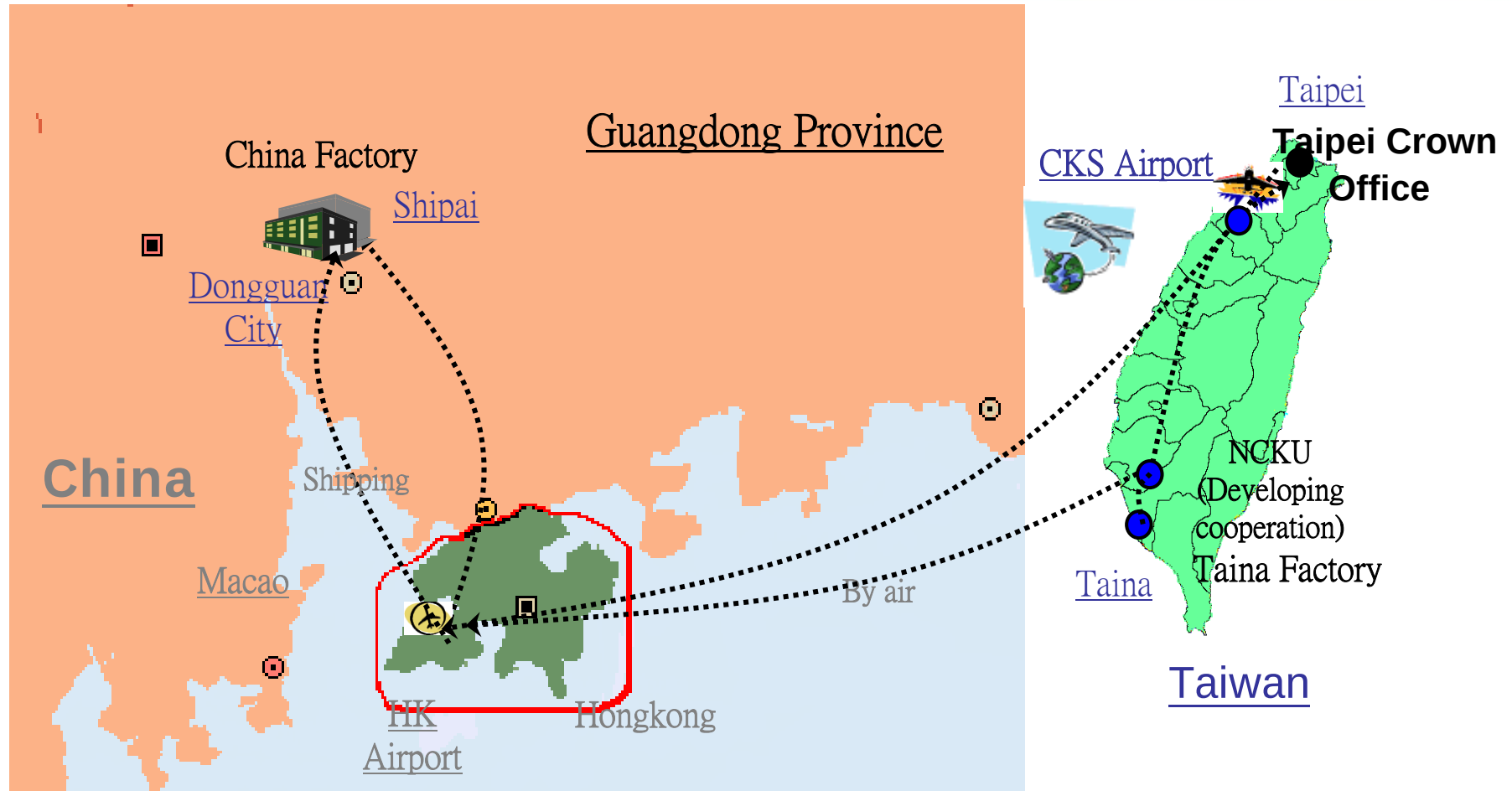


Lean Production Line

Organization



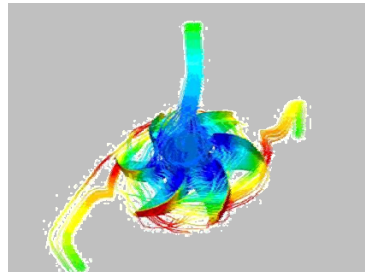
Location



Location

- Product developing

- Taiwan, Shengzheng: Fan developing
- R&D cooperating
 - National Cheng Kung University
 - Impeller design



- Sales

- Taipei
- Shengzheng

- Production

- Shengzheng-DC fans
- Taiwan-AC fans

Lab Equipments



Hemi-Anechoic Room



Drop Tester



Drop Tester



Wind Tunnel



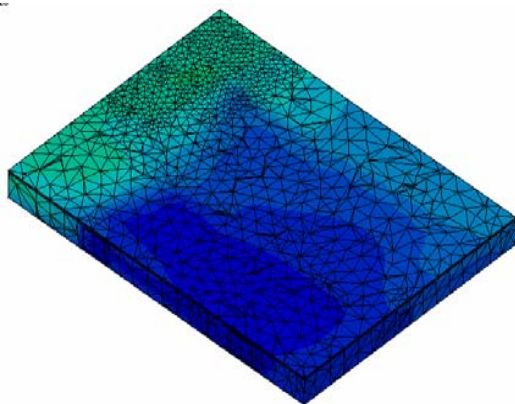
Temp./Humi. Chamber



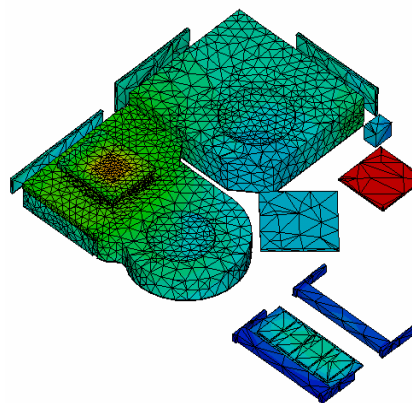
Salt Spray Tester

CFDesign

Mesh Generation

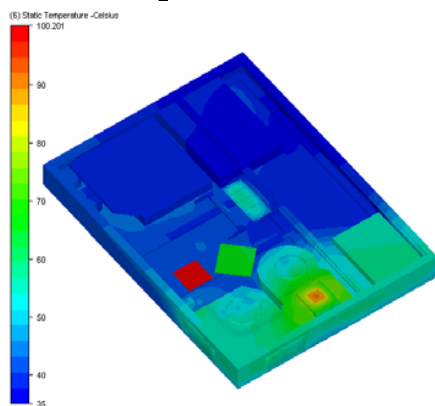


System Level

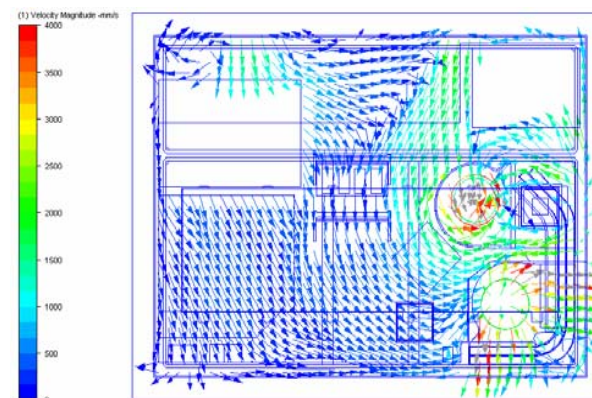


Component Level

Temperature Contours



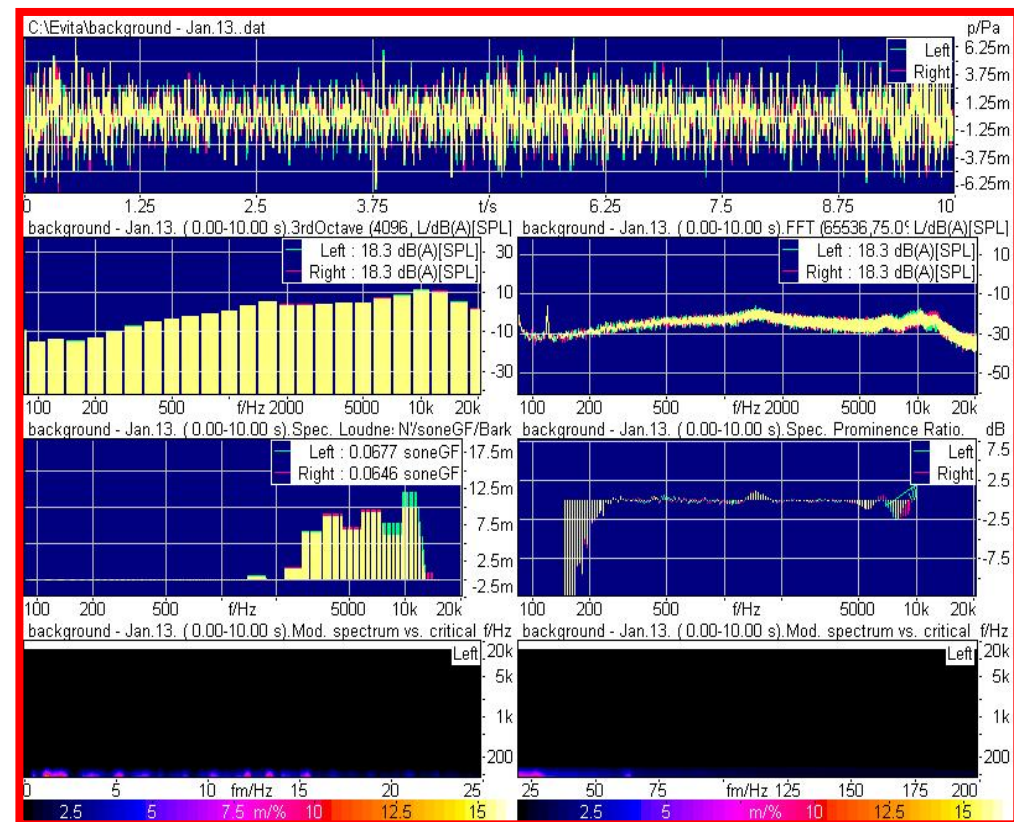
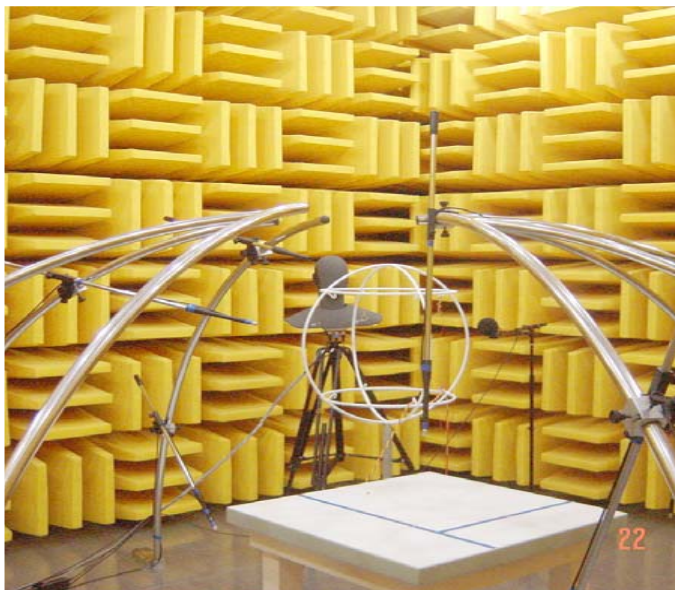
Velocity Vector



Acoustic Chamber



- ☐ **Sound Power**
- ☐ **Sound Pressure**
- ☐ **Sound Quality**



Design &

www.electronics.com.tw

實驗設備



無響室



振動測試儀



落下測試儀



風洞



冷熱衝擊

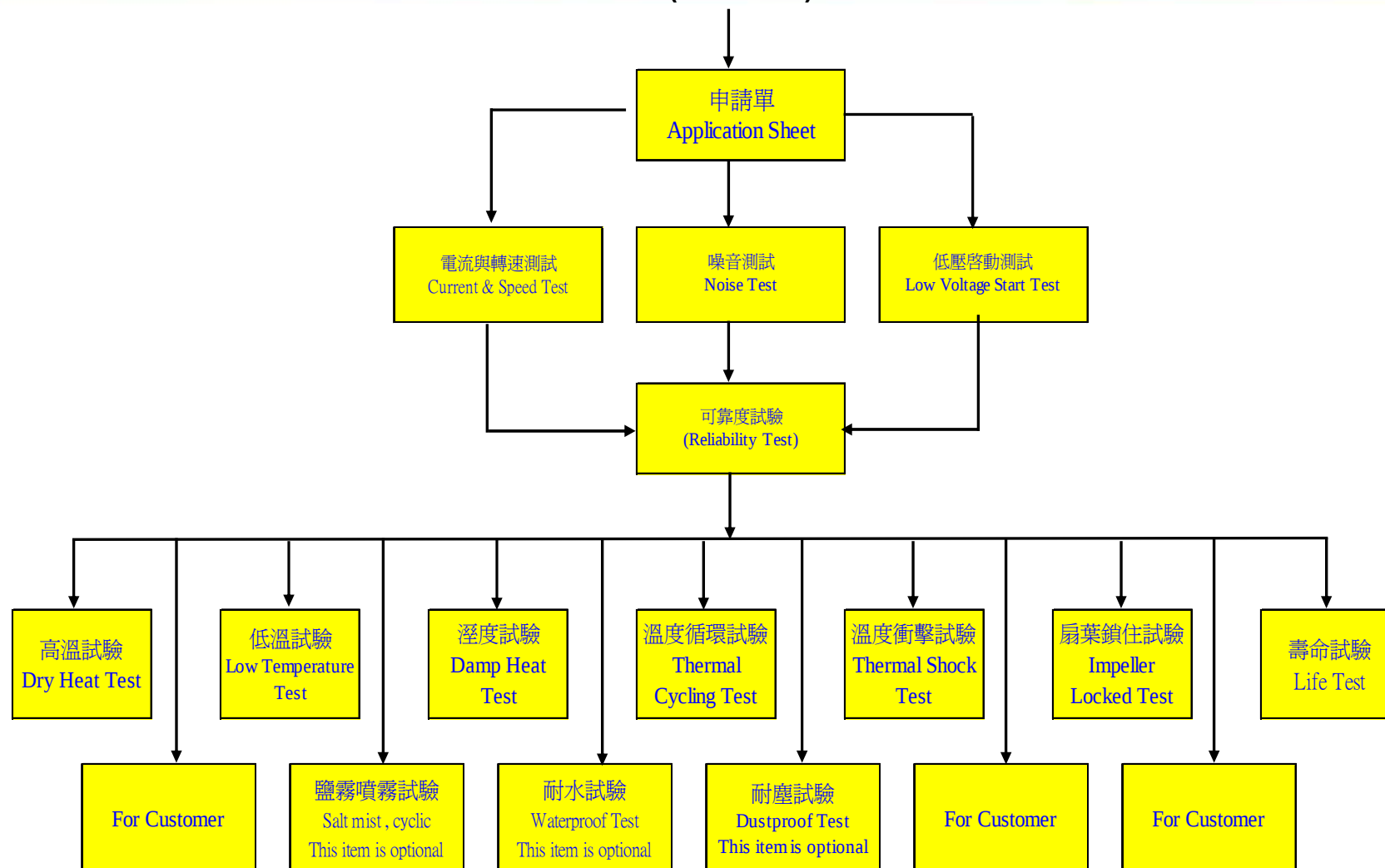


鹽霧測試儀



Process of Fan Division QL Lab

風扇試驗 (Fan Test)



Long Life and More reliable

- 1. Long Life :**
Fan Life is longer than **70,000 Hrs**
in 40C
- 2. More Reliable:**
excellent RD design and DQE quality review.
- 3. Derating checking for all componets' use in details.**

RoHS Quality System

Quality Policy

To Satisfy Customer request of RoHS....Environment Law:

- ❖ To meet customer's requirement in quality, cost & lead time.
- ❖ To treat next process as a customer.
- ❖ To do right thing, then do thing right.

Environment Policy

- ❖ Energy-saver, Resources-care, Reduction of Pollution generation, Pollution Prevention, Continuous Environmental Improvement, Observing Related Environmental Regulation, Implementation of Internal environmental Education & Promotion of Employee's Environment Concept .

ISO14001



ISO9001



Customers

SONY

D-Link[®]
Building Networks for People

NETGEAR[®]
Connect with Innovation™

FUJITSU

HITACHI
Inspire the Next


Alcatel·Lucent

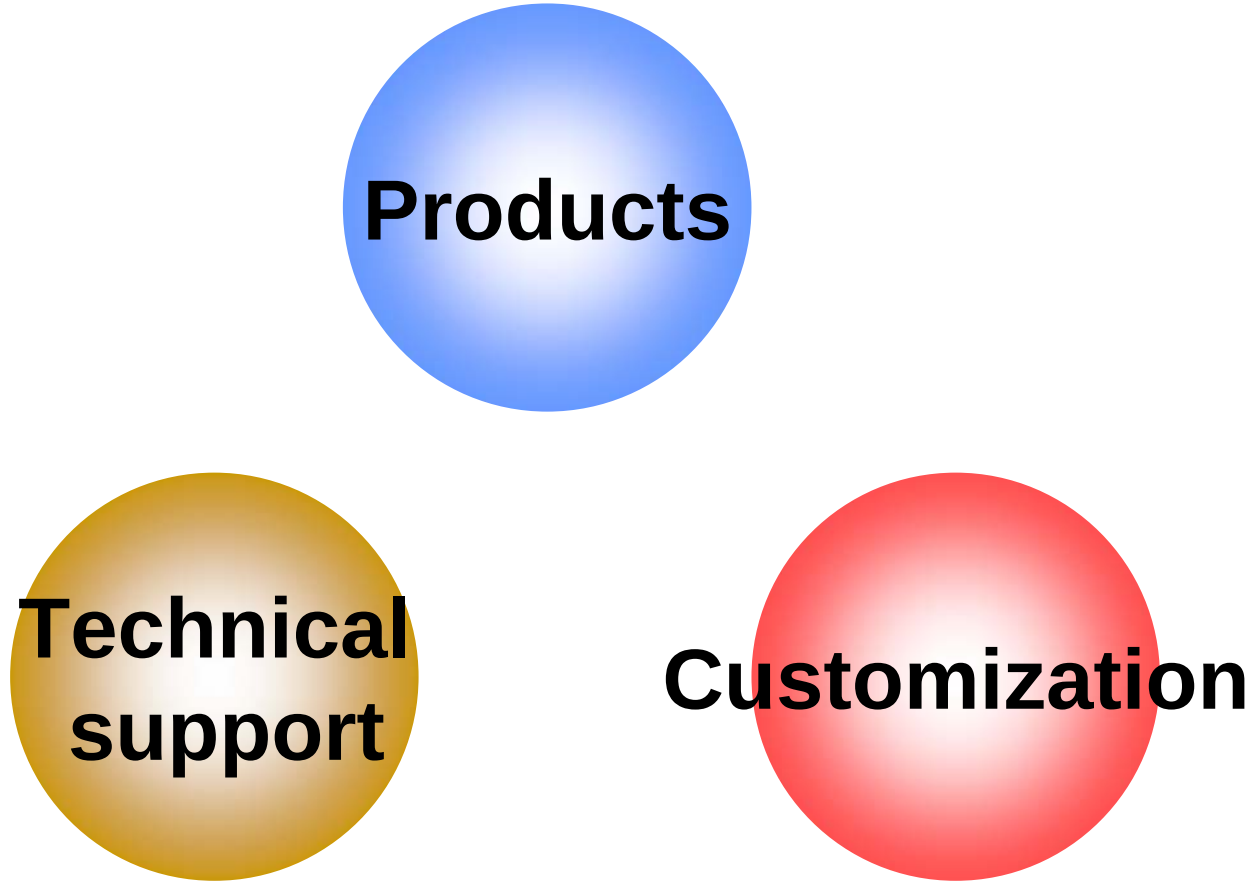
PHILIPS
sense and simplicity

BenQ

wistron[®]

 **BOSCH**

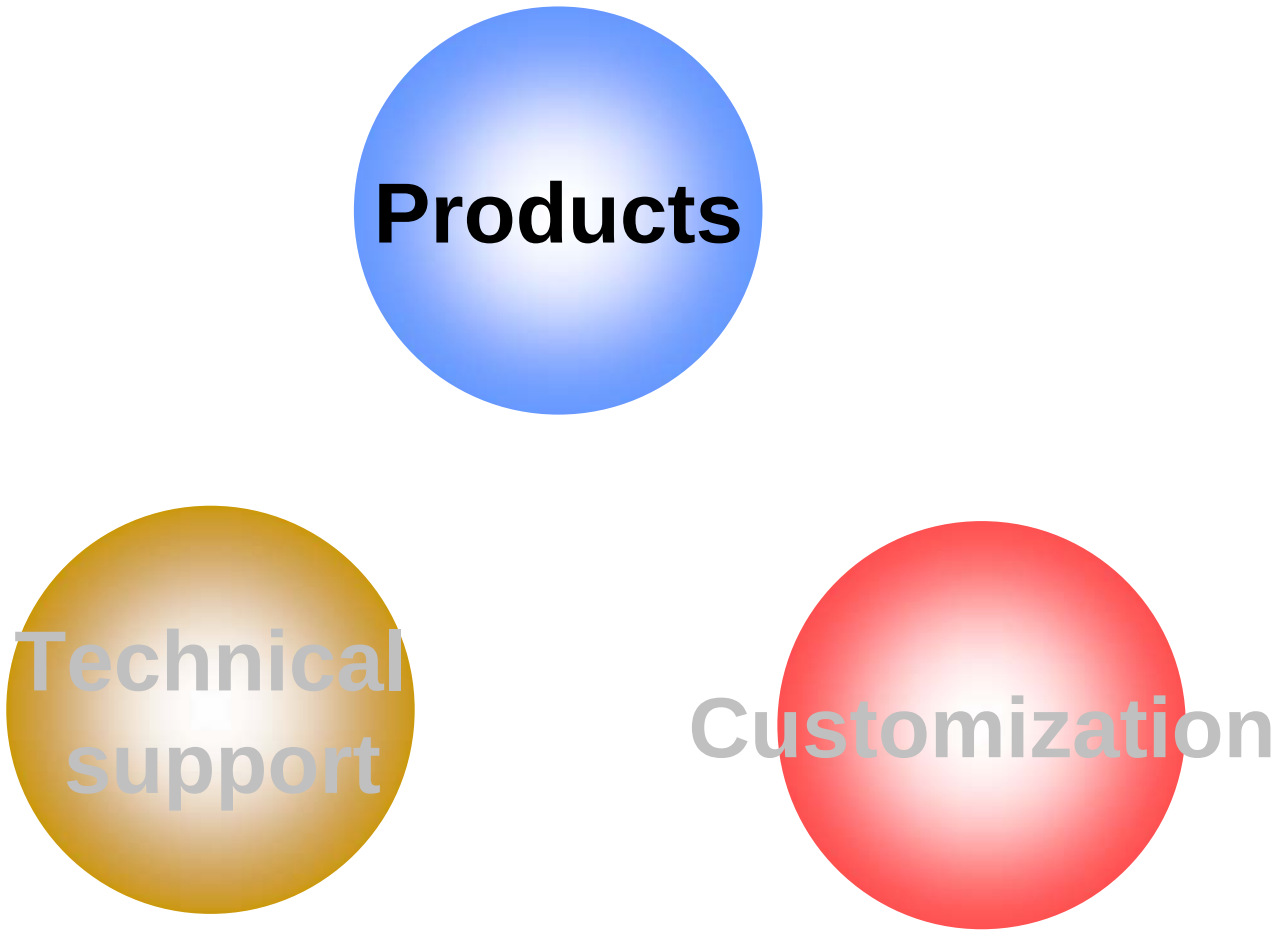
• Why can Crown do for you----



Products

**Technical
support**

Customization



Products

**Technical
support**

Customization



• Main Product

- **DC BRUSHLESS FAN**
- **AC FAN**



PRODUCTS

- **DC tubeaxial fans**

- General fans

- 25mm~140mm

- FMB fans

- 8025 、 8225 、 12025

- Power fans

- 4028 、 12038

- **DC blower**

- 5115 、 7530 、 9733 、 12032



• General fans

- **DC tubeaxial fans**

- **General fans**

- **25mm~140mm**

- FMB fans

- 8025 、 8225 、 12025

- Power fans

- 4028 、 12038

- **DC blower**

- 5115 、 7530 、 9733 、 12032





25mm~60mm

- **Application**

- Network appliance
- DVD player
- GPS
- Telecom
- Power supplier
- UPS
- Industrial control
- Automatic equipment
- Cooling
- Game player



25X25X10



30X30X10



35X35X10



40X40X10



40X40X15



40X40X20



50X50X15



50X50X20



60X60X10



60X60X15



60X60X20



60X60X25

70mm~120mm

- **Application**

- Network appliance
- Telecom
- Computer
- Power supplier
- Cooling
- Medical equipment
- Measuring equipment



70X70X20



70X70X25



80X80X15



80X80X20



80X80X25



92X92X25



120X120X25



120X120X25



120X120X32



120X120X38

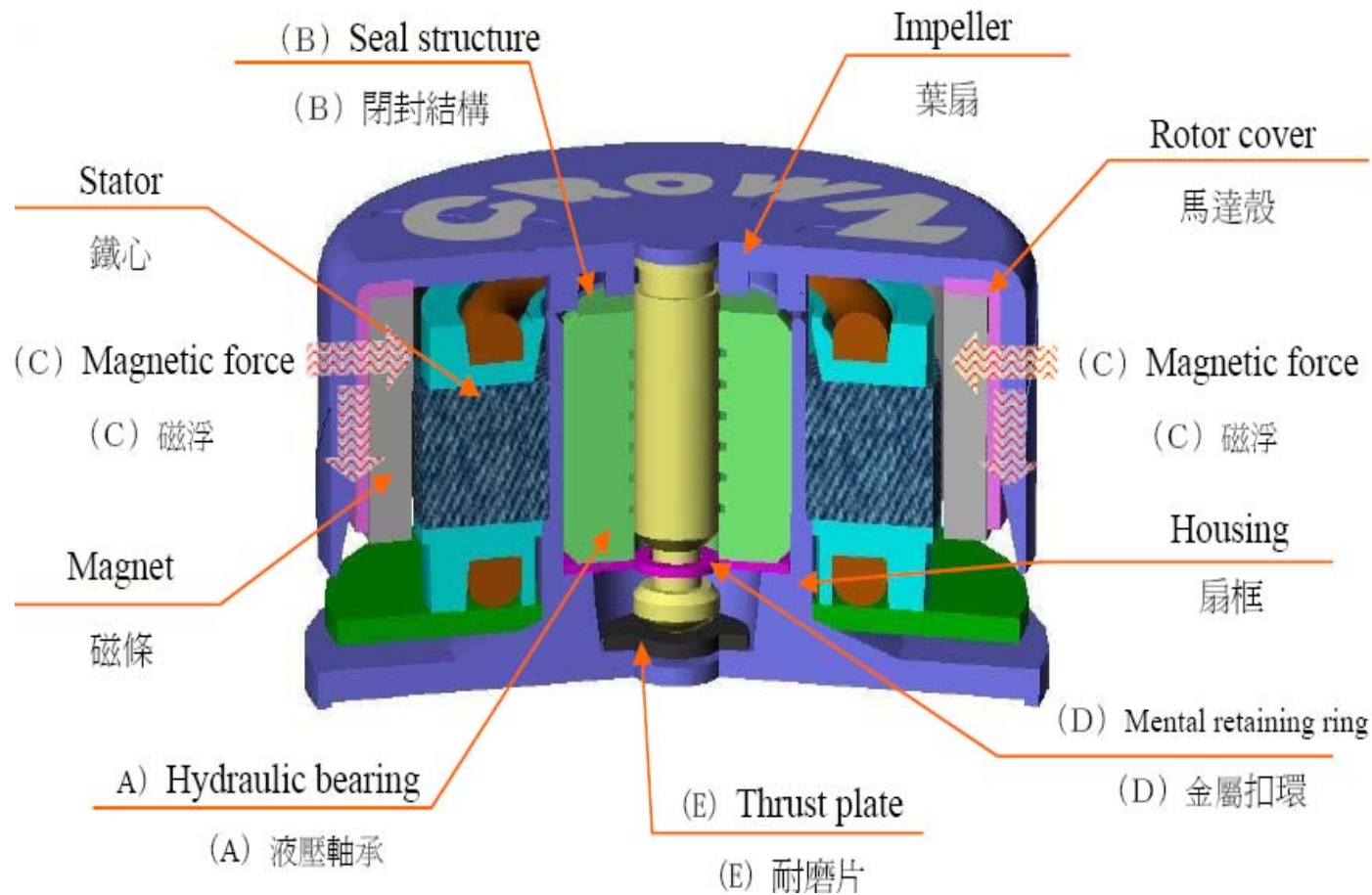


140X140X25



- **DC tubeaxial fans**
 - General fans
 - 25mm~140mm
 - **FMB fans**
 - **8025 、 8225 、 12025.....**
 - Power fans
 - 4028 、 12038
- **DC blower**
 - 5115 、 7530 、 9733 、 12032

FMB Fluid Magnetic Bearing



FMB system



FMB = 3 L

FMB = **Lower noise**
Long life span = ***Lower cost***

FMB



92X92X25

FMB



80X80X25

FMB



120X120X25

- **DC tubeaxial fans**

- General fans

- 25mm~140mm

- FMB fans

- 8025 、 9225 、 12025

- **Power fans**

- **4028 、 12038**

- **DC blower**

- 5115 、 7530 、 9733 、 12032



Power fans

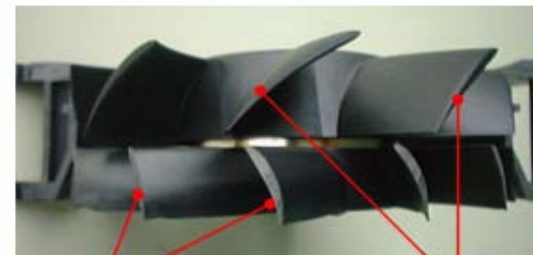
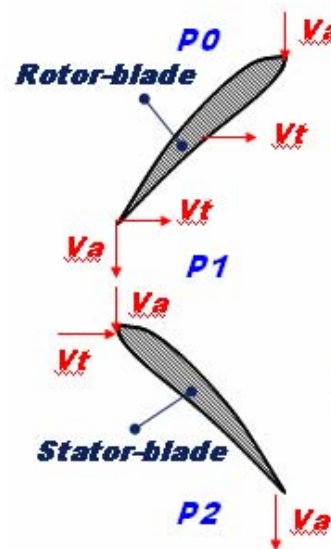


ABE04028

1. Superior performance
2. High durability
3. Long Life design



ABE12038



Stator-blade

Rotor-blade

1

Consider stator-blade

According to BERNULLI EG.:

$$P_2 + 0.5 \cdot D \cdot V_a^2 = P_1 + 0.5 \cdot D \cdot (V_a^2 + V_t^2)$$

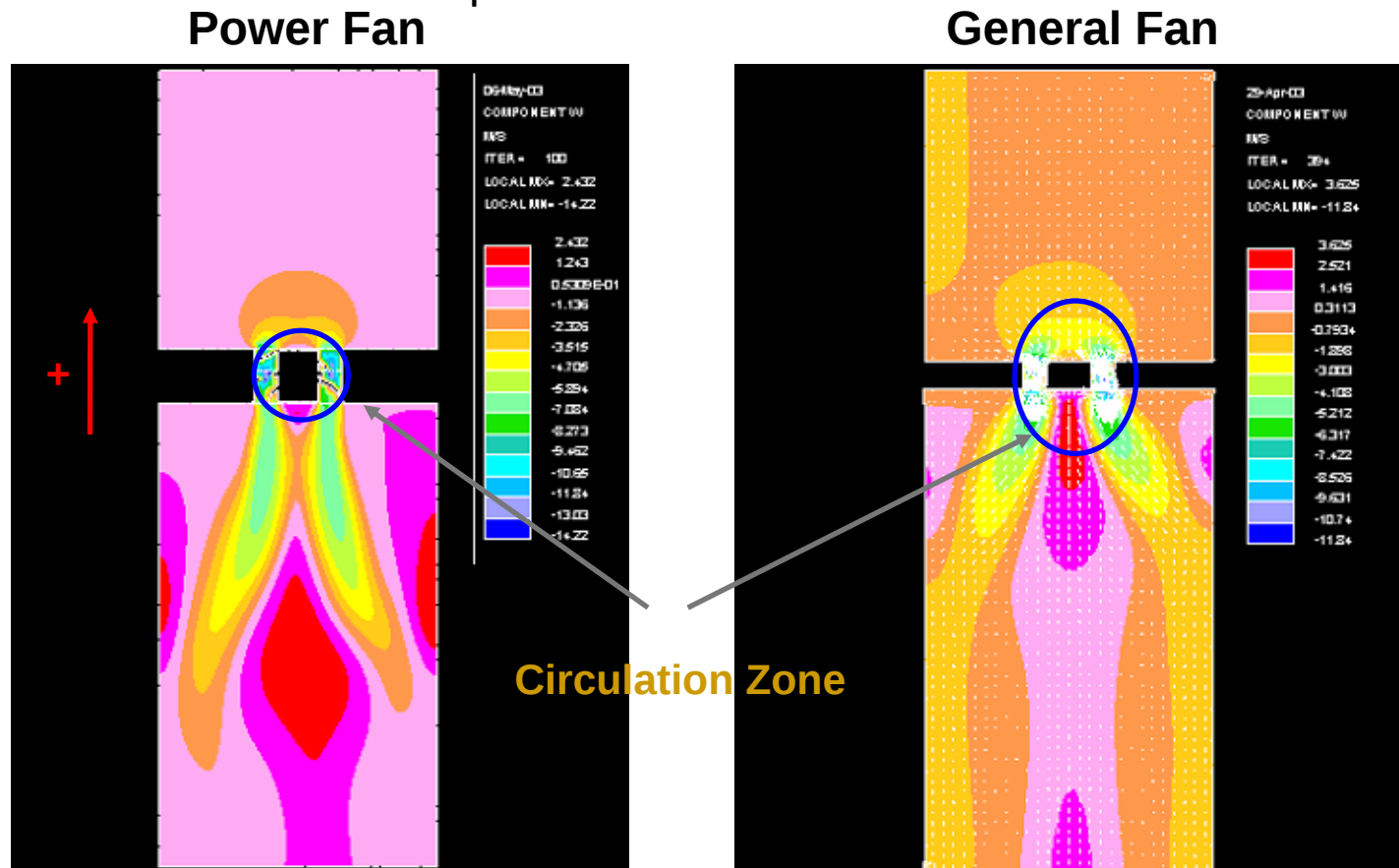
$$\text{SO } \Delta P = P_2 - P_1 = 0.5 \cdot D \cdot V_t^2$$

Extra pressure raise

Power fan v.s General fan

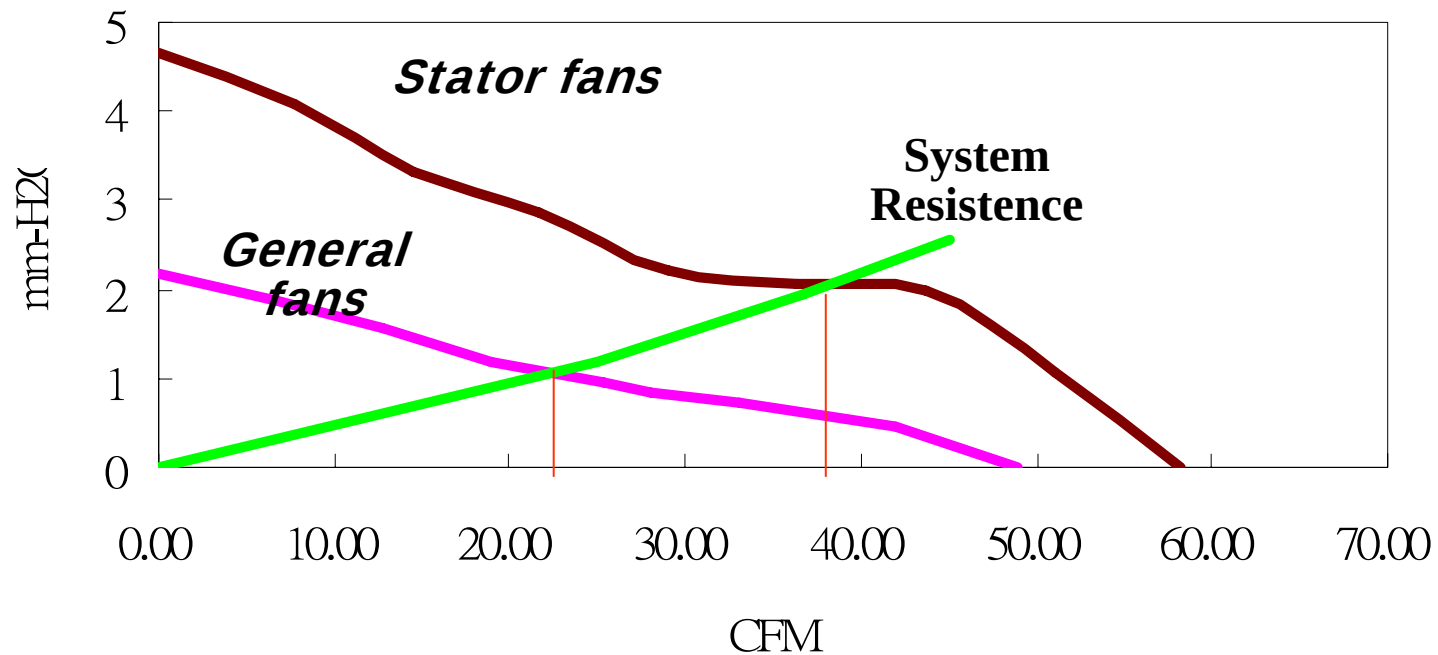
Velocity contour comparison

- Decrease circulation zone behind the fan hub
- Concentrated flow pattern



Stator fan v.s General fan (二)

P-Q Curve



Comparing at the same rotation speed

● Applications



40X40X28



120X120X38



- **DC tubeaxial fans**

- General fans

- 25mm~140mm

- FMB fans

- 8025 、 8225 、 12025

- Power fans

- 4028 、 12038

- **DC blower**

- **5115 、 7530 、 9733 、 12032**



● 51mm~125mm

- **Application**

- Copier
- Storage server
- Machinery
- Power supplier
- Cooling



51X51X15



75X75X30



97X94X33



120X120X32

● 2008 Product Roadmap

Crown plan to develop a series of centrifugal and axial fans in 2008.

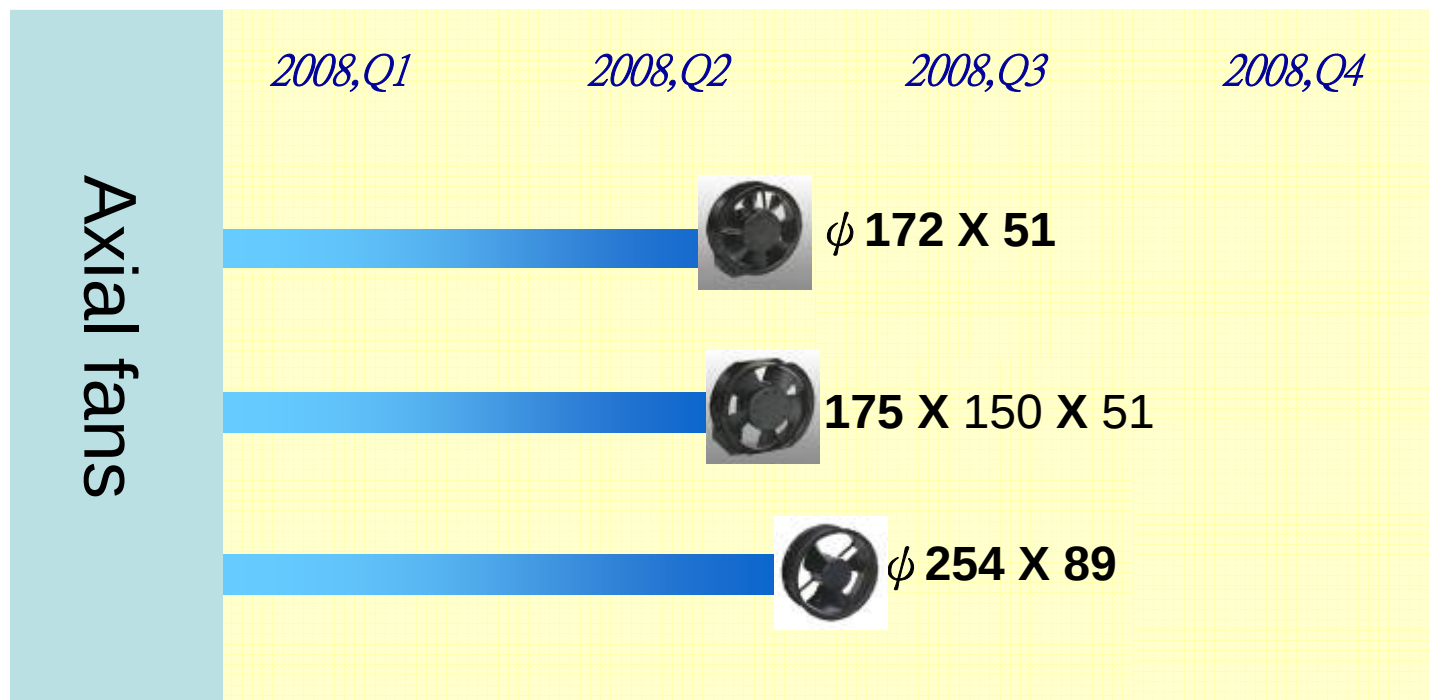
– Axial fans 15051 、 17251 、
 ϕ 250X89



– Impeller fans ϕ 101 、 ϕ 120 、 ϕ 133 、
 ϕ 175 、 ϕ 190 、 ϕ 220 、 ϕ 225 、 ϕ 250



Roadmap-Axial fans



AC PRODUCTS

- 13~250 CFM
 - 80X25,80X38,92X25,92X38,110X25,120X25,120X38,150X55, Ø172X51
- 250~CFM
 - 176X89,180X65, 205X72, Ø220X60, Ø254X89

● AC FAN 13~250 CFM

- **Application**

- Telecom equipment
- Processing Machine
- UPS



80X80X25



80X80X38



92X92X25



92X92X38



110X110X25



120X120X25



120X120X38



150X172X51



AC FAN 250~ CFM

- **Application**

- Telecom equipment
- Processing Machine
- UPS



176X176X89



180X180X69



205X205X72



220X60

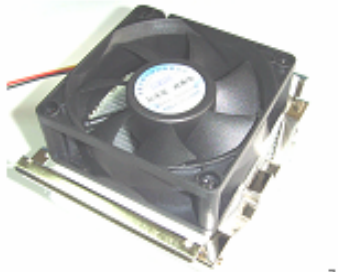


254X89

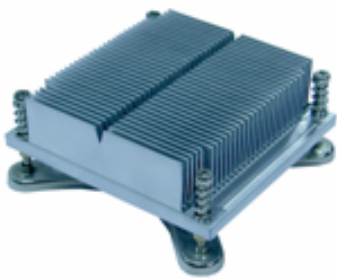


Thermal Solution

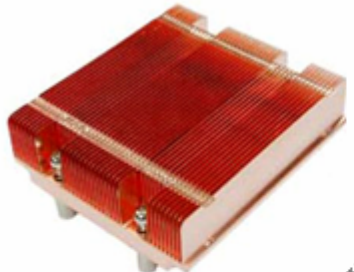
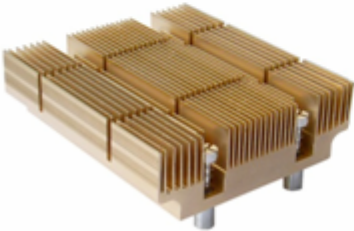
1U Server IPC Cooler

CPU 架构	产品图片	产品名称	产品尺寸	产品参数
Intel 478 架构		CUP489-B	外观尺寸: 89×68×25mm 风扇尺寸: 70×70×10mm 风扇转速: 4400R.P.M±10%	Intel Xeon Processor 3.06GHz Intel Puntium processor 2.8GHz
		CUP482-2B/ CUP484-2B	外观尺寸: 89×76×26mm 风扇尺寸: 60×60×15mm (涡轮风扇) 风扇转速: 4400R.P.M±10%	Intel Xeon Processor 3.06GHz Intel Puntium processor 3.06GHz
		JAP406-2B	外观尺寸: 89×68×55mm 风扇尺寸: 70×70×25mm 风扇转速: 4200R.P.M	Intel Puntium processor 3.06GHz Intel Celeron processor 2.8GHz

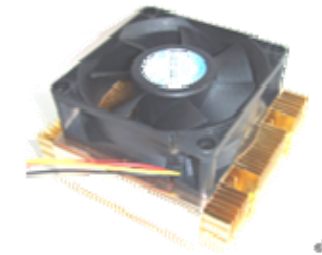
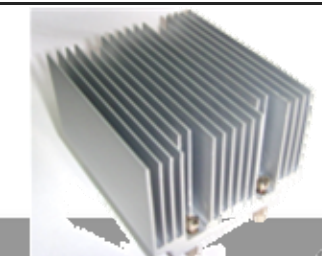
1U Server IPC Cooler

Intel Socket T	1U 服务器	LGA 771/ 775		CUP796-2B	外观尺寸: 89×76×26mm 风扇尺寸: 80×80×15mm (涡轮风扇) 风扇转速: 5000R.P.M±10%	Intel Core 2 Duo E8400 Intel Pentium 2200 Intel Pentium Core 2 Extreme X6800 Intel Pentium Core 2Quad Q6600/Q6700 Intel Celeron D 400 sequence Intel Celeron E1200
				CUP713-B	外观尺寸: 91×80×29mm 风扇尺寸: 70×70×10mm 风扇转速: 4400R.P.M±10%	Intel Core 2 Duo E8400 Intel Pentium 2200 Intel Pentium Core 2 Extreme X6800 Intel Pentium Core 2Quad Q6600/Q6700 Intel Celeron D 400 sequence Intel Celeron E1200
		至强 服务器		ALP721	外观尺寸: 83×78.9×26mm	Intel Pentium Core 2Quad Q6600/Q6700 Intel Celeron D 400 sequence Intel Celeron E1200

1U Server IPC Cooler

				CUP495/↵ CUP492↵	外观尺寸 : 88.9×78.9×26mm	Intel Xeon processor 9000 sequence↵ Intel Xeon processor 7000 sequence↵ Intel Xeon processor 5000 sequence↵ Intel Xeon processor 3000 sequence↵
				ALP497↵	外观尺寸: 88.9×80×26mm	Quad-Core Intel Xeon processor L5335/L5320/↵ L5310/5150/5148/5140/5130/5120/5110/3085/3075/3070 /3065/3060/3050/3040↵

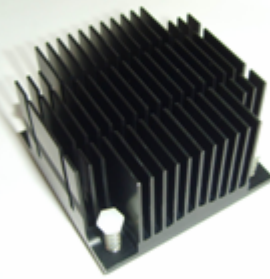
2U Server IPC Cooler

2U 及 以 上 服 务 器	LGA 771/ 775		CAP737B-2B	外观尺寸: 90×90×58mm 风扇尺寸: 92×92×25mm 风扇转速: 2000~4000R.P.M±10%	Intel Core 2 Duo E8000 sequence Intel Core 2 Duo E8000 sequence Intel Pentium 2000 sequence Intel Core 2 Extreme X6800 Intel Core 2 Quad Q6600/Q6700 Intel Celeron D 400 sequence Intel Celeron E1200
	至 除 服 器		ALP497-2B	外观尺寸: 88.9×82×53mm 风扇尺寸: 70×70×25mm 风扇转速: 4500R.P.M±10%	Quad-Core Intel Xeon processor L5335/L5320/L5310/ 5150/5148/5140/5130/5120/5110/3085/3075/3070/3065/ 3060/3050/3040
			CUP492-2B CUP495-2B	外观尺寸: 89×76×53mm 风扇尺寸: 70×70×25mm 风扇转速: 4500R.P.M±10%	Intel Xeon processor 5000 sequence Intel Xeon processor 7000 sequence Intel Xeon processor 5000 sequence Intel Xeon processor 3000 sequence
			ALP487	外观尺寸: 89×76.2×58mm	Quad-Core Intel Xeon processor L5335/L5320/L5310/ 5150/5148/5140/5130/5120/5110/3085/3075/3070/3065/ 3060/3050/3040

Desktop Cooler

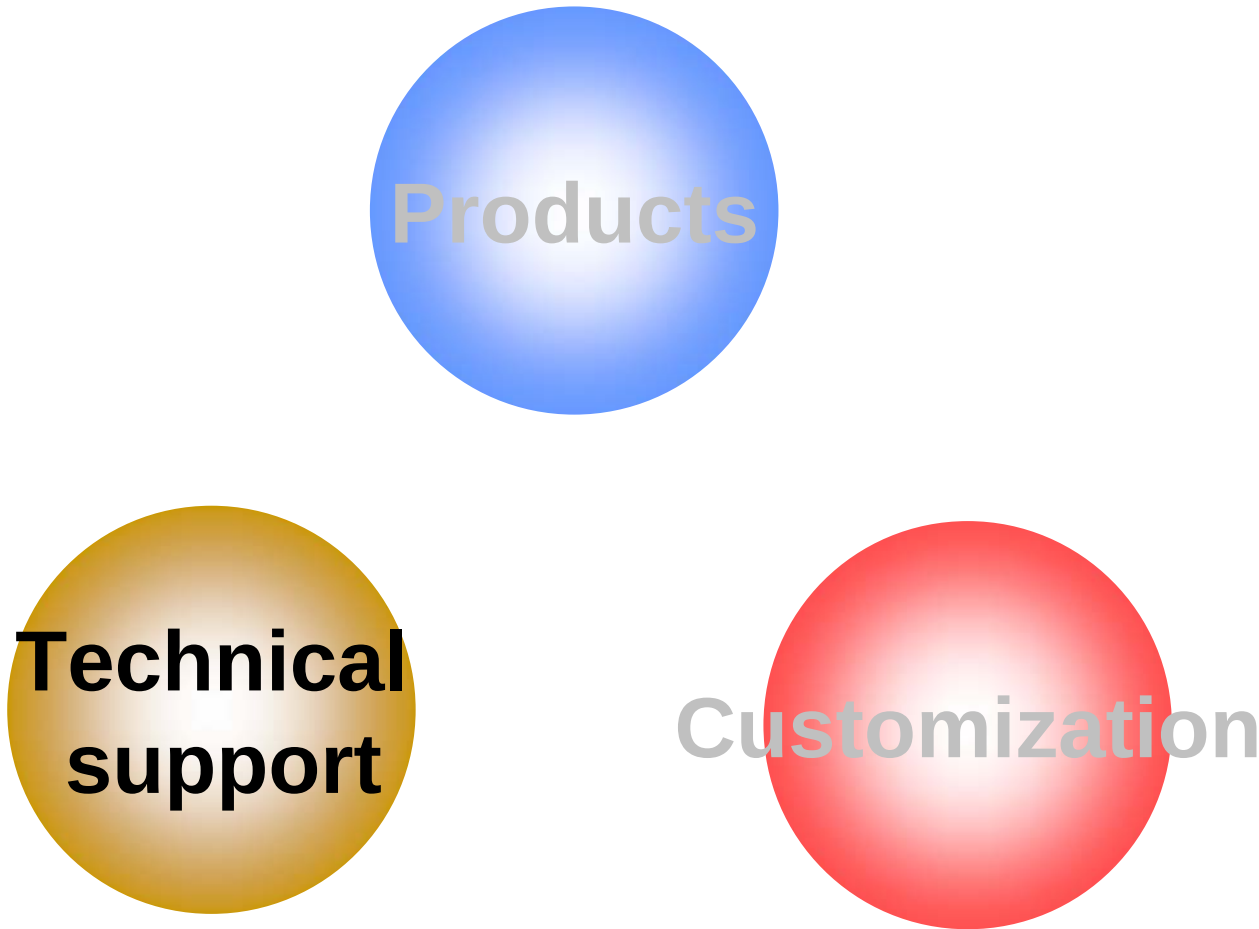
台式机散热器		ALP752-2B	外观尺寸: 80×80×75mm.	Intel Core 2 Duo E6000 sequence., Intel Core 2 Duo E8000 sequence., Intel Pentium 2000 sequence., Intel Core 2 Extreme X6800., Intel Core 2 Quad Q6600/Q6700., Intel Celeron D 400 sequence., Intel Celeron E1200.
		CAP737B-2B	外观尺寸: 90×90×56mm., 风扇尺寸: 92 × 92 × 25mm., 风扇转速: 2000~4000R.P.M±10%	Intel Core 2 Duo E6000 sequence., Intel Core 2 Duo E8000 sequence., Intel Pentium 2000 sequence., Intel Core 2 Extreme X6800., Intel Core 2 Quad Q6600/Q6700., Intel Celeron D 400 sequence., Intel Celeron E1200.

Chip Cooler

	ALPM01-B	外观尺寸: 40×40×30mm 风扇尺寸: 40×40×10mm 纯铝、铝挤加工成型
	ALPM389	外观尺寸: 50.8×50.8×40.5mm 纯铝、铝挤加工成型
	ALPM02-B	外观尺寸: 50×50×28mm 风扇尺寸: 40×40×10mm 纯铝、铝挤加工成型

	CUPM56-2B	外观尺寸: 63×63×41mm 风扇尺寸: 40×40×20mm 纯铝、铝挤加工成型
	ALKG06	外观尺寸: 45×45×35mm 纯铝、铝挤加工成型、铜丝扣固定
	JAMS06-B	外观尺寸: 40×40×20mm 风扇尺寸: 40×40×10mm 纯铝、铝挤加工成型、表面阳极、塑扣固定(标准侧孔位、中心距 54.8±0.2mm)
	JAMS07-B	外观尺寸: 40×40×20mm 风扇尺寸: 40×40×10mm 纯铝、铝挤加工成型、表面阳极、塑扣固定(标准侧孔位、中心距 58.6±0.2mm)

Why can Crown do for you----



Products

**Technical
support**

Customization

• Technical Support

- We build a team of FAE to solve you and your customers' s technical problems any time.
- Those supports include:
 - Documentation-test report, SGS.....
 - The information on AC ,DC fan usage
 - The technical support

Why can Crown do for you----



Products



Technical
support



Customization

● Customization

What is outstanding about Crown is that we provide not only mass-produce standard product series, but also fulfill individual customer requests for professional applications.

- Signal & control-----RD Signal 、 RRD Signal 、 FG Signal 、 **PWM**
- Wire & terminal-----terminal 、 length of wire 、 thermal tube 、 LED display
- Speed-----The rotation of speed
- Voltage-----DC 5V 、 12V 、 24V 、 48V; AC 110V ,220V
- Water proof-----IP54 、 IP55 、 IP58
- Fan module-----FAN TRAY



Water Proof



New Design for Water Proof.



Contact Us

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Fax: +886-2-22988195



Thank You !

&

We look forward to your joining!