



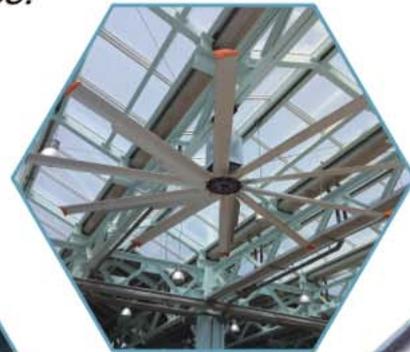
# 九龍灣通風企業有限公司

## KOLOWA VENTILATION CO., LTD.



### THE PLANT (FACTORY BUILDING) MUST HAVE VENTILATION FACTORY NEGATIVE PRESSURE EXHAUST HEAT SYSTEM FANS VENTILATION COOLING SYSTEM

- 1. Protects the environment and benefits workers' well-being.*
- 2. Restricts the accumulation of pernicious gases.*
- 3. Provides a cooling working environment.*
- 4. Environment Control and energy-saving.*
- 5. Enhances work efficiency.*
- 6. Removes excessive moisture.*
- 7. Removes excessive heat.*
- 8. Reduces dust.*



[www.kolowa.com.tw](http://www.kolowa.com.tw)

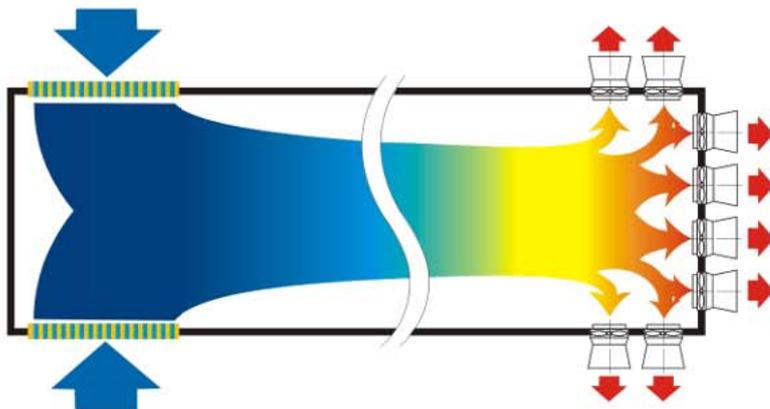
Textile and Garment Factories in Taiwan & overseas installed with Kolowa Ventilation and Cooling System.



A new factory installed with our cooling and ventilation system.



You can include our ventilation and cooling system in the planning and setting up of your new factory to save further costs.



Regardless of the length of your room, just seal the room properly all around. Fresh air coming through the cooling pads cools the room while hot air is extracted out by the ventilators.

只要廠房密閉效果良好，不管廠房多長，熱風由風扇端排出新鮮空氣一定由水簾端進入

### "PAY LESS, HIGH EFFICIENCY"

The installation of "Kolowa Fans Ventilation Cooling System" will cool down 5~8°C from 35°C high room temperature and help you save energy/power fees and equipment expenses of up to 90% compared with air-conditioning system.

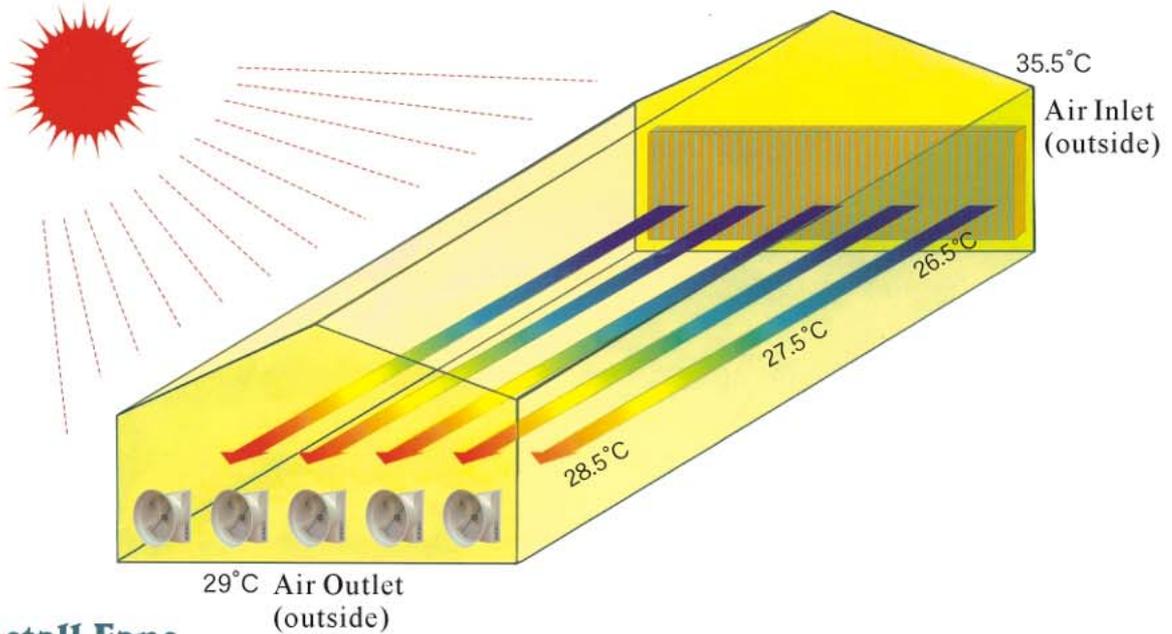
KOLOWA ENGINEERING DEPARTMENT will design, plan and consider your every requirement.

### Building Install Fans



# KOLOWA FANS VENTILATION COOLING SYSTEM

"We can't work in this heat!" The factory workers complained. This problem can be effectively solved by installing the Kolowa Fans Ventilation Cooling System. This system involves sealing the room, installing cooling pads and ventilators. With the exhaust system, fresh air coming through the cooling pads lowers down the room temperature while hot, stale air is extracted via the ventilators, thus creating a comfortable working environment for you and your staff. A happy working force means increased productivity for your company.



## Building Install Fans



## Kolowa Cooling System Electricity Consumption

Factory Dimension: 40M x 60M x 4M = 9,600M<sup>3</sup>    40M x 60M = 2,400M<sup>2</sup>

Fan Model: LR54-3DS FRP Belt Less Exhaust Cone Fan Specification: 1.1Kw/Hr. 45,000CMH 220V/60HZ 3phase

Comparison of **KOLOWA** Ventilation Cooling System over Ceiling fan and Air-conditioned unit

	Ceiling fan	Aircon	Kolowa
Function Cooling	Blowing	Cooling	Blowing & Cooling
Kw/unit	0.4Kw	1HP=0.746Kw	1.1Kw
Covered area	5 sq.mts	10 sq.mts	100 sq.mts
No. of units per 2,400 sq. mts	480	240	15
Cost/ Kw /hr.	USD 0.20c	USD 0.20c	USD 0.20c
Daily Consumption	USD 384.00	USD 358.08	USD 33.00
Monthly Consumption	USD 11,520.00	USD 10,742.40	USD 990.00
Yearly Consumption	USD 138,240.00	USD 128,908.80	<b>USD 11,880.00</b>

### ELECTRICITY CONSUMPTION:

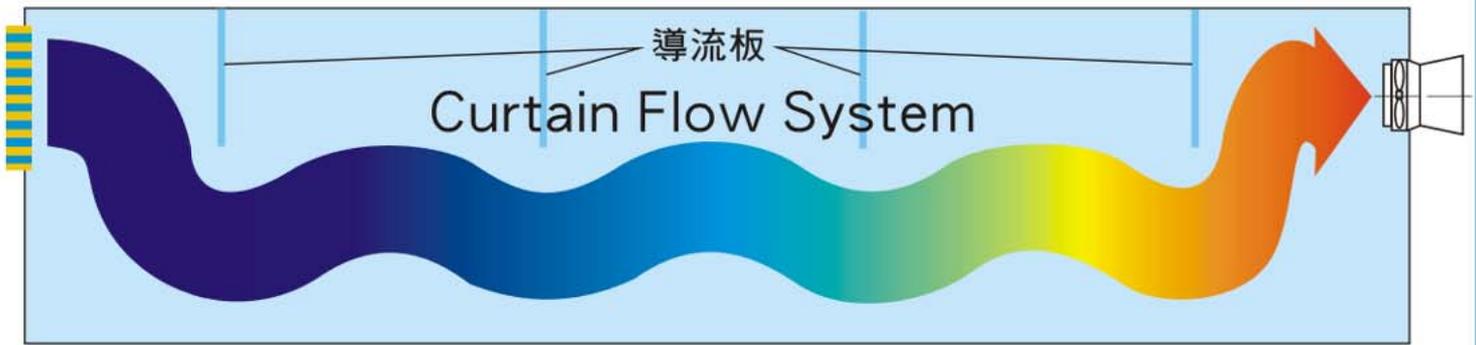
1. Ceiling Fan: USD 138,240.00 - USD 11,880.00 = USD 126,360.00 (savings/yr).

2. Air-condition: USD 128,908.80 - USD 11,880.00 = USD 117,028.8 (savings/yr).

Summary of Cooling System Materials and Installation Cost:

15 units of Fans & Cooling Pads Materials & Installation @ USD3,700/unit = USD55,500 (total cost)

Note: Excludes Technical Consultation fees and shipping costs.



## 導流板 Curtain Flow System



### The Advantages

- 1.Reduces electricity consumption.
- 2.Fresh air rapidly flows in every 40 seconds to 1 minute.
- 3.Prevents mosquitoes, flies and insects entering from outside.

### "FRESH AIR AND CLEAN ENVIRONMENT FOR GOOD HEALTH"

The bee-hive like construction of the cooling pad is made from special pulp and material. Circulating water flows through the cooling pads which increases the moisture level of the room resulting in a decrease of room temperature at the same time. The negative pressure created by the ventilators will exhaust the stale/hot air out of the room.

Our customers are happy with **"KOLOWA FANS VENTILATION COOLING SYSTEM"**

## Electronic Automatic Control Unit



### The benefits of using Factory Negative Ventilation Cooling System:

- 1.Energy-saving Factories previously using air-conditioning and refitted with our ventilation and cooling pad system can save up to 90% of electricity consumption.
- 2.Helps factory to 'breathe' with fresh air change from 30-180 seconds depending on customer's requirement. The factory is also cooled because of the air flow.
- 3.Prevents mosquitoes, flies and insects from entering into the workplace, thus reducing the occurrence of related diseases.

# VENTILATION SYSTEM , COOLING SYSTEM

The largest fan manufacturer in Taiwan with customers all over the world.

Please note : Each fan manufactured by us is with the Trademark of "KOLOWA". They are also under the coverage of factory warranty against manufacturing defects.

## LR54-3DS 48" FRP Exhaust Cone Fan



Sizes : 146x146x80cm  
Weight : 72 kgs  
Blade : 48" SMC  
or Aluminum Propeller  
HP : 2 HP  
Capacity : 46,500CMH / 27,385CFM

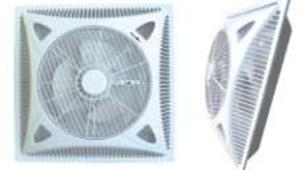
1. DIRECT RUN, WITHOUT BELT.
  2. CAN USE 10-20 YEARS, NO NEED TO MAINTENANCE.
  3. ALUMINUM ALLOY HUSK MOTOR.
  4. CAN EXTRA USE REGULATOR. TO REGULATE SPEED.
- SMC Propeller is correspond to EU RoHS Standard.

## BLDC FAN



Sizes: 147x147x60cm  
HP: 1HP 40,000CMH  
Blade: 48" 7-Blades  
Opening Required: 140x140cm

## SD-14 / SDP-14 14" Ceiling Fan



Sizes:60.5x60.5x20cm  
Bare height:11.5cm  
Outlet size:16"  
Blade:14"3-Blades  
Power:53W/28W  
3/5 Variable speed

## LFS54-7D FRP Shutter Fan



Sizes:148x148x45cm  
HP:1.5HP  
RPM:500  
Blade: 48" 7-Blades / 6-Blades  
Shutter: PVC Shutter /  
Connecting Rod Shutter

## FS54-6D FRP Connecting Rod Shutter Fan



Material quality:FRP  
Weight:72kg  
Capacity:40,000CMH /  
23,557CFM  
Opening Required: 139x139cm

New Connecting Rod PVC Shutter

**SAVING ENERGY,  
SINGLE PHASE**

**SDP-14 Function  
Sterilization +  
Deodorization**

## 14" Solar Ventilating Fan

**New Type**

SF-14R



Model NO.: SF-14R / SF-14S  
Sizes:53x53x25cm  
(When solar panel is 0 degrees)

Blade:14" Weight:17 kgs  
Motor: DC 24V RPM:1,750

SF-14S



Solar panel power:20W/18V  
Capacity:3,315CMH

1. Solar panels can adjust for four angles (0/30/45/90 degrees).
2. Nature power ventilator (Solar only).

## LR55 FRP Exhaust Fan



Size: 146x146x60 cm  
HP: 2HP  
Blade: 50" 3-Blades(Nylon+Fiber)  
Capacity: 52,000CMH  
Opening Required:140x140 cm  
PVC Shutter

## NEW KV55 Exhaust Fan



Sizes:146x146x58cm  
Material quality :FRP  
HP: 1 HP 40,000 CMH  
2HP 45,000 CMH  
Blade :50"6-Blades Galvanized propeller  
Opening Required:140x140cm

Model No. **LR42-7D**  
FRP Exhaust Cone Fan  
Size: 114x114x80cm  
Weight: 60 kgs  
HP: 2HP RPM: 500  
Blade: 36" 7-Blades  
Capacity: 28,000CMH /  
16,489CFM  
Opening Required: 106x106cm



Model No. **LR60-3D**  
FRP Exhaust Cone Fan  
Size: 162 x 162 x 92cm  
HP: 3HP  
RPM: 600  
Blade: 52" Aluminum Alloy  
Capacity: 59,000CMH /  
34,746CFM  
Opening Required:153x153cm



Model No. **LR62-3D**  
Fan Exhaust Cone Fan  
Size: 168x168x102cm  
HP: 1.75 HP  
RPM: 500  
Blade: 54" Galvanized Steel  
Capacity: 51,500CMH /  
30,329CFM  
Opening Required:159x159cm



Model No. **LR42-5D**  
FRP Exhaust Cone Fan  
Size: 114x114x80cm  
Weight: 58 kgs  
HP: 1HP RPM: 500  
Blade: 36" Galvanized Steel  
Capacity: 18,000CMH /  
10,600CFM  
Opening Required: 106x106cm



Model No. **LR46-7D**  
FRP Exhaust Fan  
Size: 128x128x61cm  
Material quality: FRP  
HP: 1HP/2HP 500rpm  
Blade: 42" 7-Blades Propeller  
Capacity: 38,000CMH /  
22,379CFM  
Opening Required: 120x120cm



Model No. **ACP-42**  
Movable Fan  
Size: 141x90x143cm  
HP: 2 HP/630rpm  
Weight: 112 kgs  
Blade: 36" Galvanized Steel  
Capacity: 35,000CMH /  
20,612CFM

Model No. **PR-36**  
Movable Fan  
Size: 125x80x132cm  
Blade: 36" 7-Blades  
HP: 1-2HP  
Capacity: 35,000CMH /  
20,612CFM



**NEW** Model No. **RF-42**  
Round Hanging Fan  
Size: 117X117X41cm  
Blade: 42" 6-Blades,  
7-Blades  
HP: 1HP  
Capacity: 33,000CMH /  
19,434CFM

Every year we export hundreds of fan in the world. Loading containers...



# SF-118/190/240/288 Industrial HVLS Ceiling Fan

Electricity consumption: 2~5.0A  
Speed: 10-60RPM(Variable Speed)

TYPE	SIZE	TYPE	SIZE
SF-118	3M	SF-240	6.1M
SF-190	4.8M	SF-288	7.3M



Inverter

1 Set of 190" HVLS Fan=Efficiency of 8 sets 48" exhaust cone fan



(Save electricity 88% Save energy fee of 7 sets 48" exhaust cone fan)



**NEW TYPE**

**MSF-90  
Movable HVLS Fan**



**RSF-155  
Road HVLS Fan**





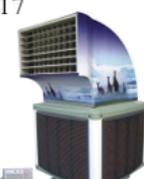
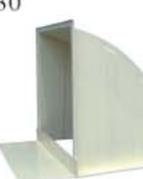
# KOLOWA VENTILATION



Our high-quality products all made in Taiwan.

Our installation experiences more than ten thousand company/factory.

We apply the automobile technology to the manufacture of industrial fans and ventilators for you.

 <p>Model No. <b>MF20-6A</b>            Sizes : 76 x 76 x 15cm            Weight : 26kgs            HP : 1/2 HP            RPM : 1200            Blade : 20° Aluminum Alloy            Capacity : 4,150CMH / 2,444CFM</p>	 <p>Model No. <b>LG32-5A</b>            Galvanized Steel Fan            Sizes: 91.5x91.5x30cm            Weight: 49 kgs            HP: 1/2 HP RPM: 660            Blade: 28° Galvanized Steel            Capacity: 10,000CMH / 5,889CFM</p>	 <p>Model No. <b>LG42-5D</b>            Galvanized Steel Fan            Sizes: 107.5x107.5x30cm            Weight: 56 kgs RPM: 500            HP: 1 HP (Direct Drive)            Blade: 36° Galvanized Steel            Capacity: 18,000CMH / 10,600CFM            VL: 70 Feet VW: 25 Feet</p>	 <p>Model No. <b>LGS42-6A</b>            Shutter Fan Weight: 54 kgs            Sizes: 107.5x107.5x30cm            HP: 1/2 HP RPM: 600            Blade: 36° Galvanized Steel (Aluminum Alloy Rim)            Capacity: 18,000CMH / 10,600CFM            Opening Required: 110x110cm</p>
 <p>Model No. <b>LGS54-6A</b>            Exhaust Shutter Fan            Sizes: 137.5x137.5x45cm            Weight: 87 kgs            HP: 1 HP RPM: 390            Blade: 48° Galvanized Steel or Stainless Steel            Capacity: 33,000CMH / 19,434CFM</p>	 <p>Model No. <b>LG66-3A</b>            Sizes: 167x167x60cm            Weight: 134 kgs            HP: 2HP 59,500CMH / 35,041CFM            3HP 67,500CMH / 39,752CFM            Blade: 60° Aluminum Alloy</p>	 <p>Model No. <b>GS-42</b>            Connecting Rod Shutter Fan            Sizes: 107.5x107.5x32cm            Weight: 75 kgs            HP: 1 HP RPM: 500            Blade: 36° Galvanized Steel or Stainless Steel            Aluminum Connecting Rod Shutter            Capacity: 18,000CMH / 10,600CFM</p>	 <p>Model No. <b>GS-54</b>            Connecting Rod Shutter Fan            Sizes: 137.5x137.5x47cm            Weight: 98 kgs            HP: 1.5HP RPM : 500            Blade: 48° Galvanized Steel or Stainless Steel            Capacity: 33,000-42,000CMH / 19,434-24,734CFM            Aluminum Connecting Rod Shutter</p>
 <p>Model No. <b>SE24-6D</b>            Sizes: 74x31x74cm            Weight: 24.5 kgs            HP: 1/2 HP RPM: 860            Blade: 24° Aluminum Alloy            Capacity: 7,000CMH / 4,123CFM            Net: Stainless Steel net</p>	 <p>Model No. <b>KGW-A24</b>            Sizes: 80.5 x 80.5 x 35cm            Weight: 33.5 kgs            HP: 1/2 HP RPM: 860            Blade: 24° Aluminum Alloy            Opening Required: 74.5x74.5cm            Capacity: 7,000CMH / 4,123CFM            With PVC Shutter and Stainless Steel net</p>	 <p>Model No. <b>LFS54-3DS</b>            48° FRP Shutter Fan            Sizes: 137.5x137.5x38cm            Weight: 80kgs            HP: 1 HP 33,000CMH / 19,434CFM            2 HP 45,000CMH / 26,501CFM            Blade: 48° SMC Propeller</p>	 <p>Model No. <b>KF-20 / KF-24</b>            FRP Roof Ventilator            Sizes: 122x94 (60,64)cm            Weight: 28.5 kgs            HP: 1/2 HP RPM: 1100            Capacity: 5,400CMH / 3,180CFM            Blade: 20° Aluminum Alloy 24° Coating Propeller</p>
 <p>Model No. <b>KF-36</b>            36° Roof Mounted Exhaust Fan            Sizes: 120x152 (96,55)cm            Weight: 60 kgs RPM: 800            HP: 3/4 HP(60Hz) / 1HP(50Hz)            Blade: 36° Stainless Steel            Capacity: 17,000CMH / 10,011CFM</p>	 <p>Model No. <b>KF-48</b>            FRP Roof Ventilator            Sizes: 239.6x160 (94,70)cm            Weight: 117 kgs            Capacity: 45,000CMH / 26,501CFM            Blade: 48° SMC or Aluminum Propeller</p>	 <p>Model No. <b>KF54-2P</b>            FRP Roof Ventilator (Two Door)            Size: 240x161x(67,123)cm            Weight: 105kgs HP: 2 HP            Blade: 48° SMC Propeller            Capacity: 46,500CMH / 27,385CFM</p>	 <p>Model No. <b>NEW KF-48</b>            FRP Roof Ventilator            Size: 200x159x(H96/58.5)cm            Weight: 117kgs            Capacity: 45,000CMH / 26,501CFM            Blade: 48° SMC or Aluminum Propeller</p>
 <p>Model No. <b>DF-18P</b>            Variable Speed Water Cooling Fan            Voltage: 220V            Sizes : 110x102 x 197 cm            Kw: 1.1Kw            Weight : 120 kgs            Noise: 55-65dB            Capacity : 8,700-18,800CMH / 5,123-11,071CFM</p>	 <p><b>New Type</b>            Model No. <b>CF-36</b>            Cooling Fan            Sizes: 141x70x168cm            Motor: DC Brushless            Blade: 36° 3-Blades            Voltage: 110/220V            Noise: &lt;72dB            Capacity: 28,000CMH</p>	 <p>Model No. <b>DF-8P2</b>            3-Speeds Water Cooling Fan            Voltage: 110V/220V            Sizes : 83 x 45 x 138 cm            Kw: 0.58Kw            Weight : 46 kgs            Noise: 56dB            Capacity : 8,000CMH</p>	 <p>Model No. <b>KT-24000</b>            Kw: 1.1Kw            Voltage: 110V/220V            Size: 112x72x180cm            Noise: 68dB            Capacity: 22,000CMH            Application Area: 120-180M<sup>2</sup></p>
 <p>Model No. <b>LR42-6A</b>            FRP Exhaust Cone Fan            Sizes: 114x114x80cm            Weight: 54 kgs            HP: 1/2 HP RPM: 660            Blade: 36° Galvanized Steel            Capacity: 20,000CMH / 11,778CFM            Opening Required: 106x106cm</p>	 <p>Model No. <b>LR54-3AS</b>            FRP Exhaust Cone Fan            Sizes: 146x146x80cm            Weight: 79 kgs            HP: 1.5 HP RPM: 630            Blade: 48° SMC Propeller            Capacity: 45,000CMH / 26,501CFM            Opening Required: 140x140cm            The driving belt is adjustable automatically by a stainless steel spring.</p>	 <p>Model No. <b>SE54-6D</b>            Size: 139x139cm (With hanging hook)            Propeller: 48° GI            Capacity: 40,000CMH / 23,557CFM            with protect net</p>	 <p>Model No. <b>LR54-2P</b>            FRP Exhaust Cone Fan            Sizes: 146x146x80cm            Weight: 72 kgs            Blade: 48° SMC or Aluminum Propeller            HP: 2 HP            Capacity: 46,500CMH / 27,385CFM</p>
 <p>Model No. <b>LR54-7D</b>            FRP Exhaust Cone Fan            Sizes: 146x146x80cm            Weight: 82 kgs            HP: 2 HP RPM: 500            Blade: 48° 7-Blades            Capacity: 34,000-42,000CMH / 20,023-24,734CFM            Opening Required: 140x140cm</p>	 <p>Model No. <b>ACP-24</b>            Movable Fan            Sizes: 70x80x66cm            Weight: 70 kgs            Blade: 24° Aluminum Alloy            Capacity: 20,000CMH / 11,778CFM</p>	 <p>Model No. <b>ACP-54</b>            Movable Fan            Sizes: 171x105x180cm            Weight: 124 kgs            Blade: 48° Aluminum or SMC Propeller            HP: 2 HP            Capacity: 46,500CMH / 27,385CFM</p>	 <p><b>Electronic Automatic Control Unit</b></p>
 <p>Model No. <b>EL-54</b>            FRP Elbow For LR54-3DS            Size: 30°, 60°, 90°            Also have Elbow for LR42-6A.            Weight(For 54"): 30°: 12kgs            60°: 20kgs            90°: 38kgs            Weight(For 42"): 30°: 10kgs            60°: 15kgs            90°: 28kgs</p>	 <p>Model No. <b>RB-54</b>            FRP Roof Base For LR54-3DS            Also have Roof Base for LR42-6A.            Weight(For 54"): 48kgs            Weight(For 42"): 27kgs</p>	 <p>Model No. <b>WF-10 Cooling Pads</b>            Sizes:            150x30x10cm            150x60x10cm            150x60x15cm            180x30x10cm            180x60x10cm            180x60x15cm            200 x60x15cm</p>	 <p><b>Aluminum Trough</b>            Up trough and top cover            Side Cover            2.5" SS Slice</p>



# VENTILATION SYSTEM - THEORY , FLOW CHART & PERFORMANCE

Types(Simulation-Installation)	Illustration of Installation	Ventilation Efficiency
<p><b>With the best effect of reducing the temperature</b></p> <p><b>Cooling pads ventilation System</b></p>	<p><b>Factory in Changhua County</b></p>	<p><b>Cooling pads, Ventilation System</b></p> <p>The method of cooling is done by installing a system of wet cardboard, through the use of evaporating cooling, Wind Chill Effect, and negative pressure ventilation to easily rid the house of odor and stagnant air, and maintain more consistent house temperatures.</p>
<p><b>Horizontal ventilation system</b></p> <p><b>Longitudinal ventilation system</b></p>	<p><b>Cooling pad</b></p>	<p>1. After installation, the combined systems effectively exhaust high temperature air to reduce the house temperature(32~65° C) sharply and maintain it at the most comfortable condition, that is between 25~32° C. You may find an increase in production efficiency.</p> <p>2. It effectively improves the factory ventilation by 95~99%.</p>

The most economic type		Negative Pressure Ventilation System
<p><b>3-1 Wall mounted ventilation system</b></p>		<p>The theory of air exchange and air distribution remove odor and stagnant air out of the house, and hung in windows or doorways to brings fresh air in. The speed of air flow per second, number of air change per hour, the amount of fresh air to be brought in can be accurately controlled.</p> <p>1. (Fig. 3-1) Wall mounted negative pressure ventilation system This is the best negative pressure ventilation system. It effectively improves the factory ventilation efficiency by up to 90~97%.</p>
<p><b>3-2 Wall mounted ventilation system(elbow type)</b></p>		<p>2. (Fig. 3-2) Wall mounted negative pressure ventilation system (Elbow type) To prevent from exhausting the hot air to the neighbors, wall mounted negative pressure ventilation(Elbow type) is a good solution to allow the hot air to be discharged either upward or downward. This is also an environment-friendly ventilation system. It effectively improves the factory ventilation efficiency by 85~95%.</p>

Roof Mounted Ventilation System		Negative pressure ventilation system
<p><b>4-1 Roof mounted ventilation system (FRP molded in one piece)</b></p>		<p>3. (Fig. 4-1) Roof mounted negative pressure ventilation system In case a wall mounted negative pressure ventilation system is not applicable, then roof mounted negative pressure ventilation system is specially designed for roof mounted applications. First of all, build a base, then install the FRP exhaust fan to solve the problem once and forever. The roof mounted exhaust fan extracts the contaminated or grease laden air out of the roof. This is also an environment-friendly ventilation system.</p>
<p><b>4-2 Roof mounted ventilation system (Steel case)</b></p>		<p>4. (Fig. 4-2) Negative pressure ventilation system The FRP exhaust fan shown in Fig. 4-1 is molded in one piece. It offers the characteristics of dependability, durability, good looks and is water and typhoon proof. However, FRP costs a lot more. An exhaust fan made of C type steel should be a pricewise choice. However, the exhaust fan made of C type steel is not as durable as that of FRP. The painted plates may crack and cause leaking after several years of use. To ensure that the system will function properly, maintenance and care are absolutely necessary.</p>
<p><b>Roof Mounted ventilation system</b></p>		<p><b>Roof Mounted Forced Ventilation System</b> The external air is drawn in by mechanical systems. One doesn't have to concern himself with how hard the wind is blowing and from what direction. The operating efficiency depends on the height of the building.</p> <p>It effectively improves the ventilation efficiency by 50~90%.</p>




**The largest Fans manufacturer in Taiwan**  
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