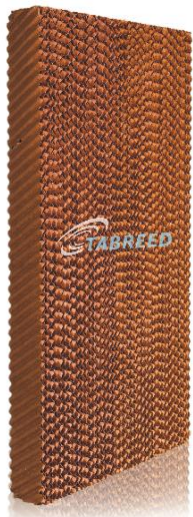


Objectives of Establishing Tabreed Cell Pad Facility in Turkey



Principals of Evaporative Cooling

Evaporative cooling reduces air temperature through the evaporation of water



Principals of Evaporative Cooling

It is the transfer of energy from

Air  **Water**

The diagram shows a large grey arrow pointing from the word "Air" to the word "Water". Inside the arrow, the word "ENERGY" is written in red capital letters.



Principals of Evaporative Cooling



Principals of Evaporative Cooling

The temperature of dry air drops significantly through the transition phase of liquid to vapor



PRACTICAL



**ECO
FRIENDLY**



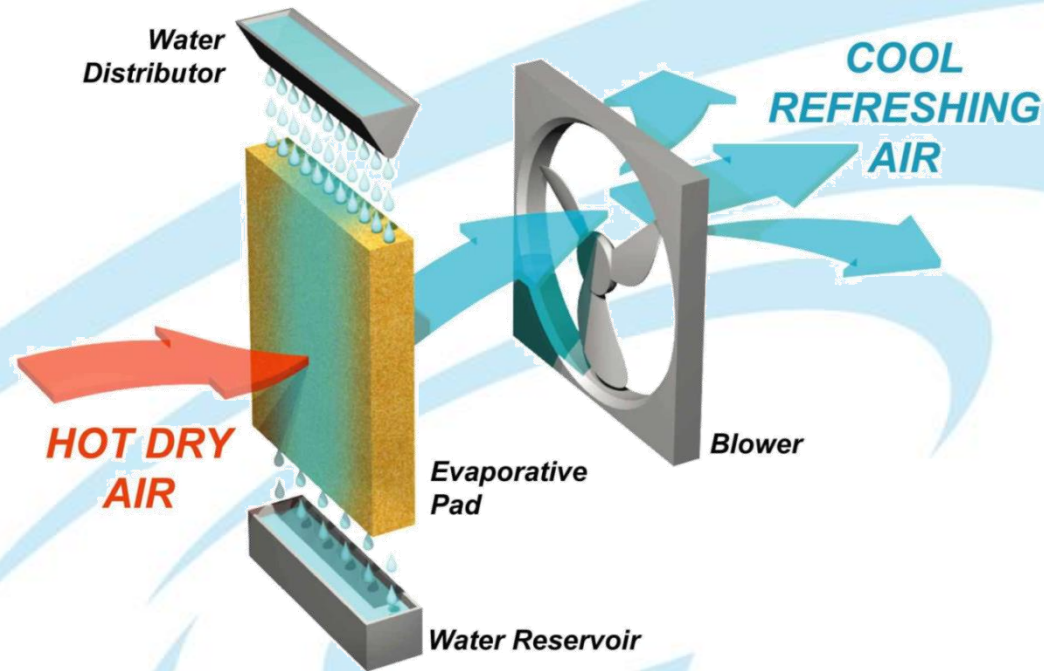
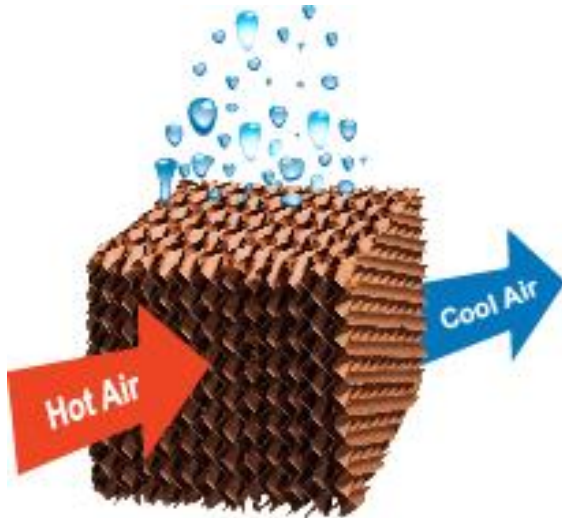
ECONOMICAL



Healthy

Tabreed Cooling System

The cell pads act as the intermediary surface in which hot air interacts with the water to reduce air temperature.

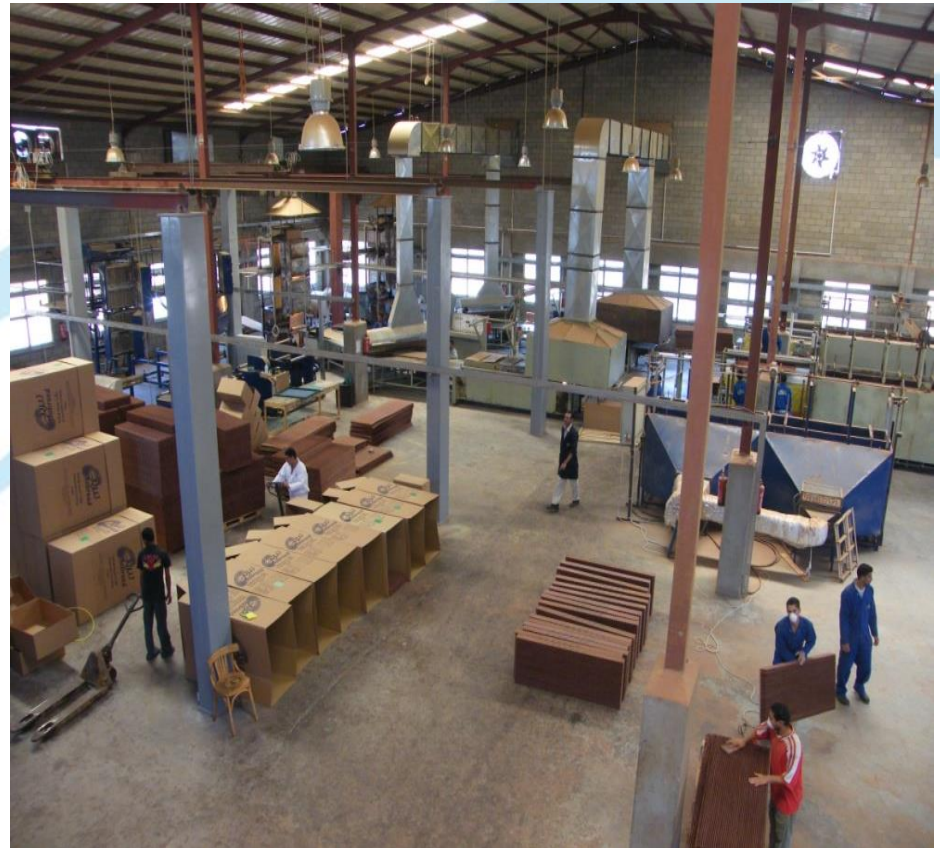




Craftsmanship

Tabreed is manufactured:

- ✓ finest European cellulose material
- ✓ highest quality chemicals
- ✓ 7 years of experience



Craftsmanship

The papers are:

- ✓ Cut
 - ✓ Corrugated
 - ✓ Compiled together
- In a bee hive structure



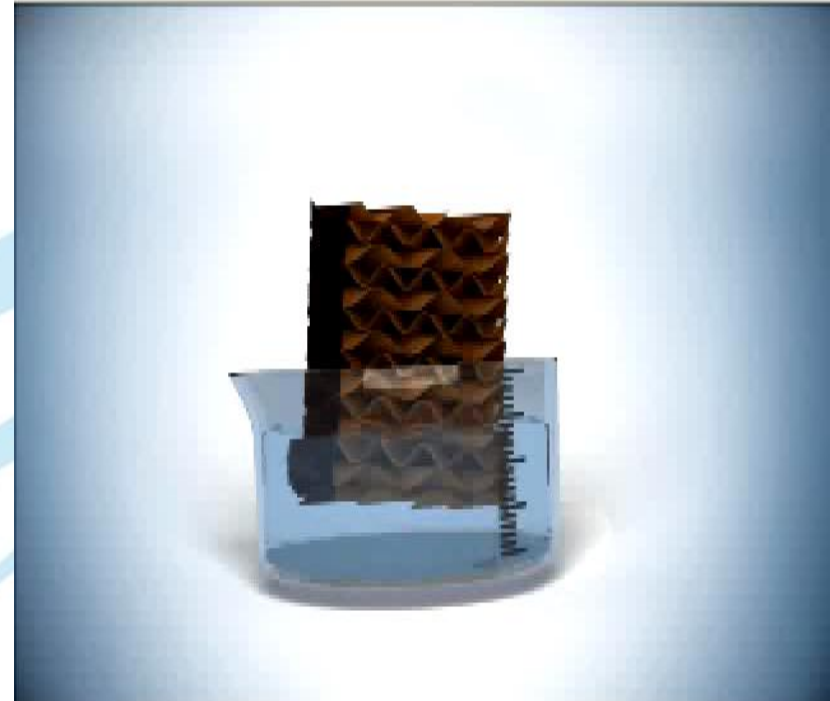
Craftsmanship

The efficiency of the cell pads depends on:

- ✓ the pad's ability to absorb and release water
- ✓ The cohesiveness of layers
- ✓ Streaming of the air flow

Reduce air temperature by up to

22 degrees Celsius



Difference Between High Pressure Misting and Tabreed Cooling System

High pressure misting

is the process of introducing a fixed amount of water

Regardless..

of the capacity of air to vaporize the water

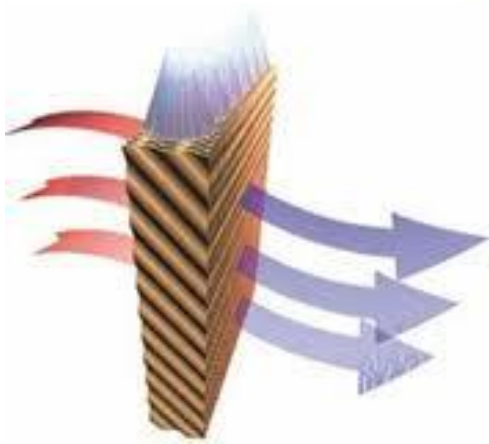




Difference Between High Pressure Misting and Tabreed Cooling System

Tabreed Cooling System is a

**SELF-REGULATORY
SYSTEM**



**THE AIR WILL ONLY
PICK UP AS MUCH
WATER AS IT CAN
POSSIBLY CARRY**

Why Tabreed SBS



PRACTICAL



**ECO
FRIENDLY**



ECONOMICAL



Healthy



**POULTRY
FARMS**



**GREEN
HOUSES**



**FACTORIES
& STORES**

The Optimal
temperature for
raising chicken is at



Poultry Farms

The Effect of High Temperature on Flock Performance



Ultimate
performance



Moderate
performance

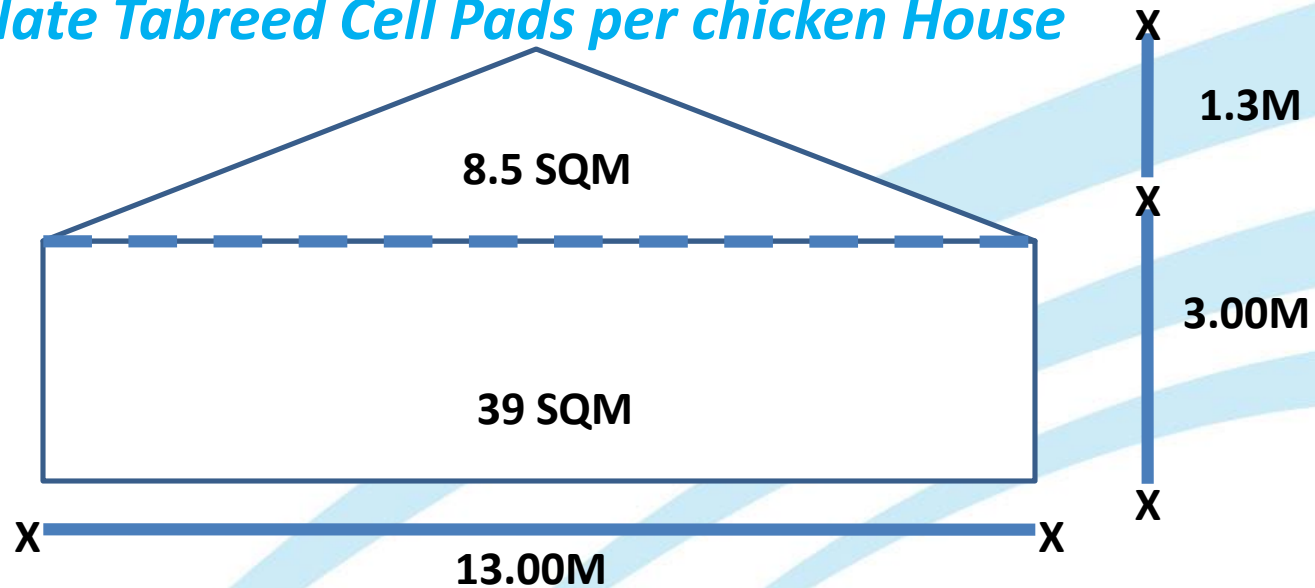


Low
performance

Temperature/ degrees Celsius	Productivity	FCR	Quality of Egg	Mortality Rates
21-25	Ultimate performance	Ultimate performance	Ultimate performance	Ultimate performance
26-30	Moderate performance	Moderate performance	Ultimate performance	Ultimate performance
31-35	Moderate performance	Moderate performance	Moderate performance	Moderate performance
35-40	Low performance	Low performance	Low performance	Moderate performance
40<	Low performance	Low performance	Low performance	Low performance

Poultry Farms

How to Calculate Tabreed Cell Pads per chicken House



1- Total Cross Sectional Area of Hen House

$$39 \text{ SQM} + 8.5 \text{ SQM} = 47.5 \text{ SQM}$$



How to Calculate Tabreed Cell Pads per chicken House

2- Air Speed through the cell pads / SQM:

2.00 meters/ Second



Poultry Farms

How to Calculate Tabreed Cell Pads per chicken House

3- Required Air Volume :

Cross Sectional Area

(CSA) X Air Speed X 60 min X 60 sec

= 47.5 sqm X 2 X 60 X 60

= 342,000 m³/hr



Poultry Farms

How to Calculate Tabreed Cell Pads per chicken house

3- Cell Pad Sizing:

Total Air volume/ Air Speed

= 342,000/7200

= 47.5 SQM

= 47.5*0.15 (Tabreed cell pad thickness)

= 7.2 cubic meters of cell pads/ house/ Cycle



Poultry Farms

Tabreed Rule of Thumb

Area of Tabreed Pads (15cm thickness) = CSA of the house



Poultry Farms

How to Calculate Tabreed Cell Pads per chicken house

4- Total Cost of Tabreed Cell Pads/ House:

= 7.2 m³* 180 USDs

=1,296 USDs/ House/ Cycle



Poultry Farms

How to Calculate the Total Number of Fans Required/ House

1- Fan Capacity at 10 PA:

= 42,000 m³/hr



Poultry Farms

How to Calculate the Total Number of Fans Required/ House

Total Air Volume/fan capacity

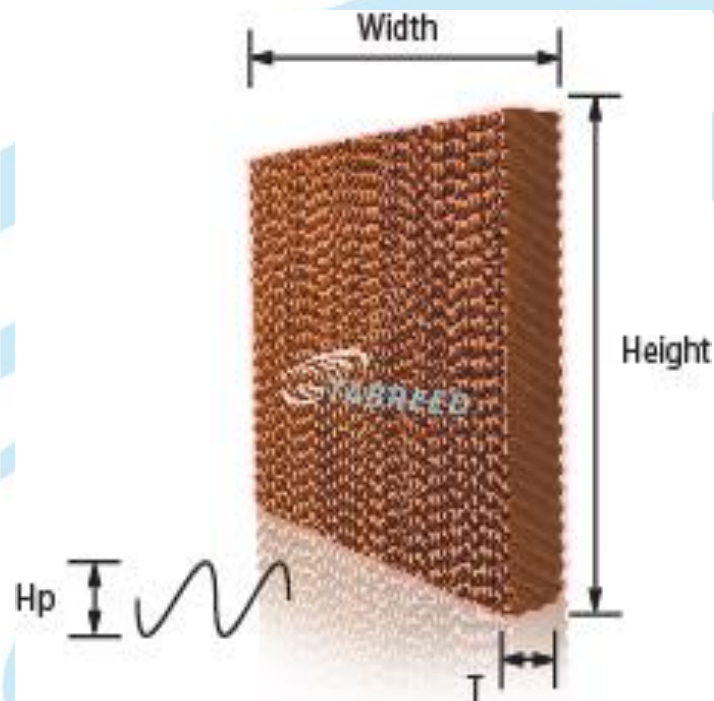
= 342,000/ 42,000

= 8 Fans



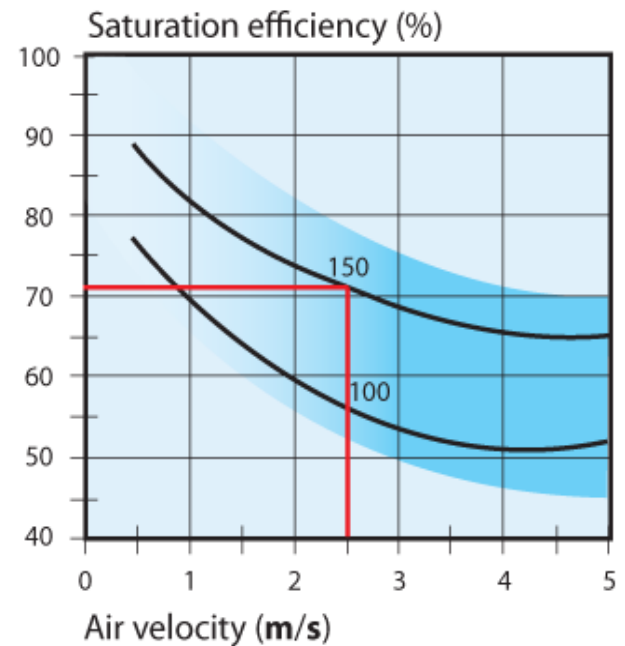
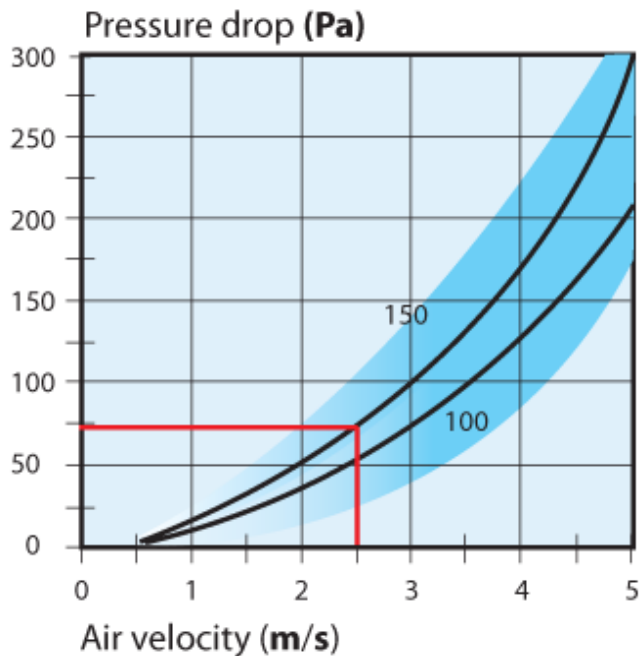
Product Specs

Width	500 , 600 mm
Height	1,000 , 1,200 , 1,500, 1,800 , 2,000 mm
Thickness	50 , 100 , 150 , 200 mm
Angles	45*45 deg , 45*15 deg , 60*30 deg
Corrugation Height	7.5, 5.0 mm



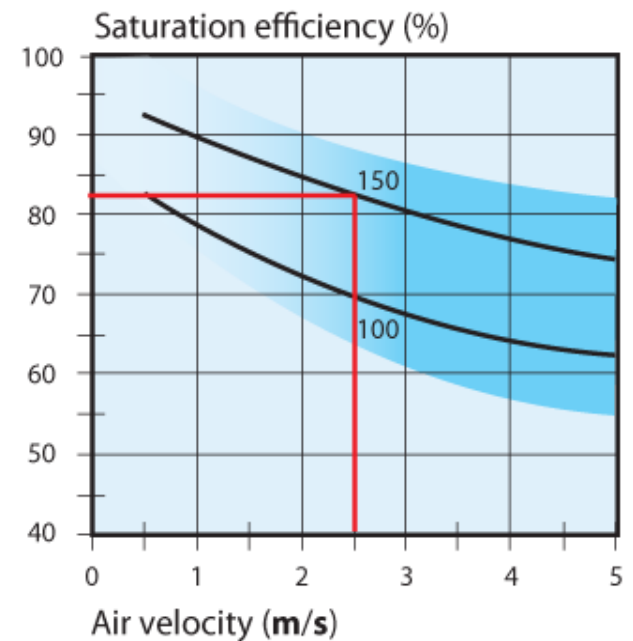
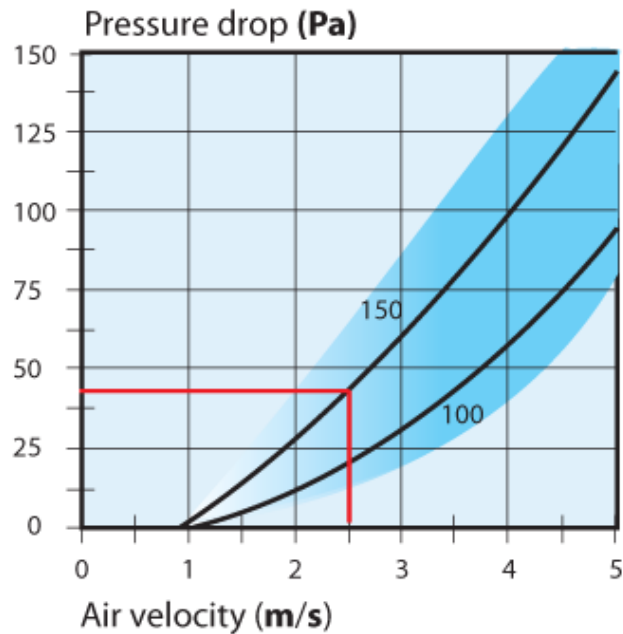
Performance

Tabreed 45/45 Angle



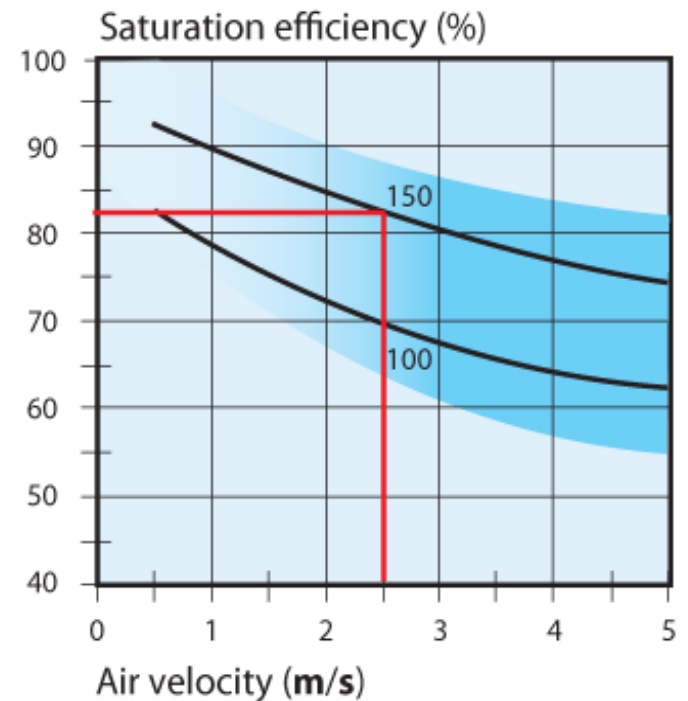
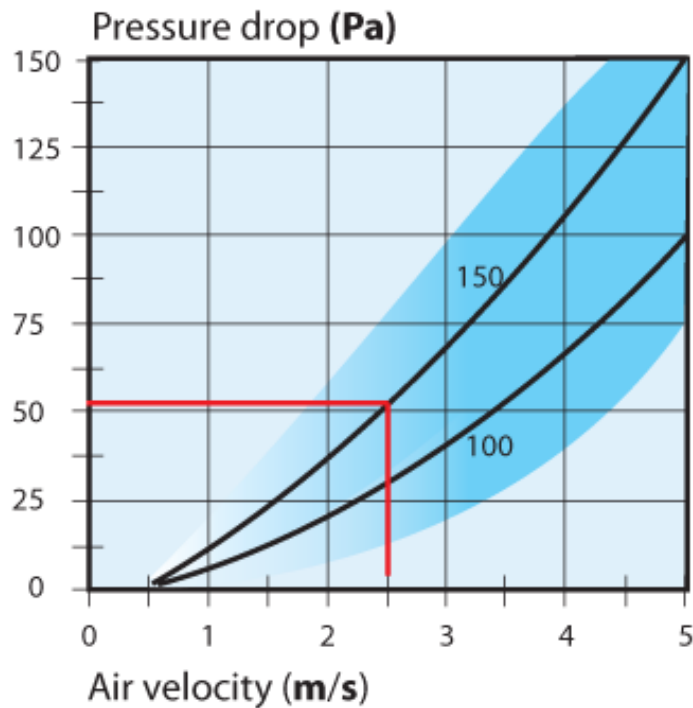
Performance

Tabreed 15/45 Angle

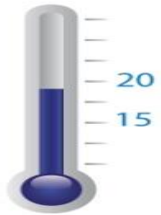


Performance

Tabreed 30/60 Angle



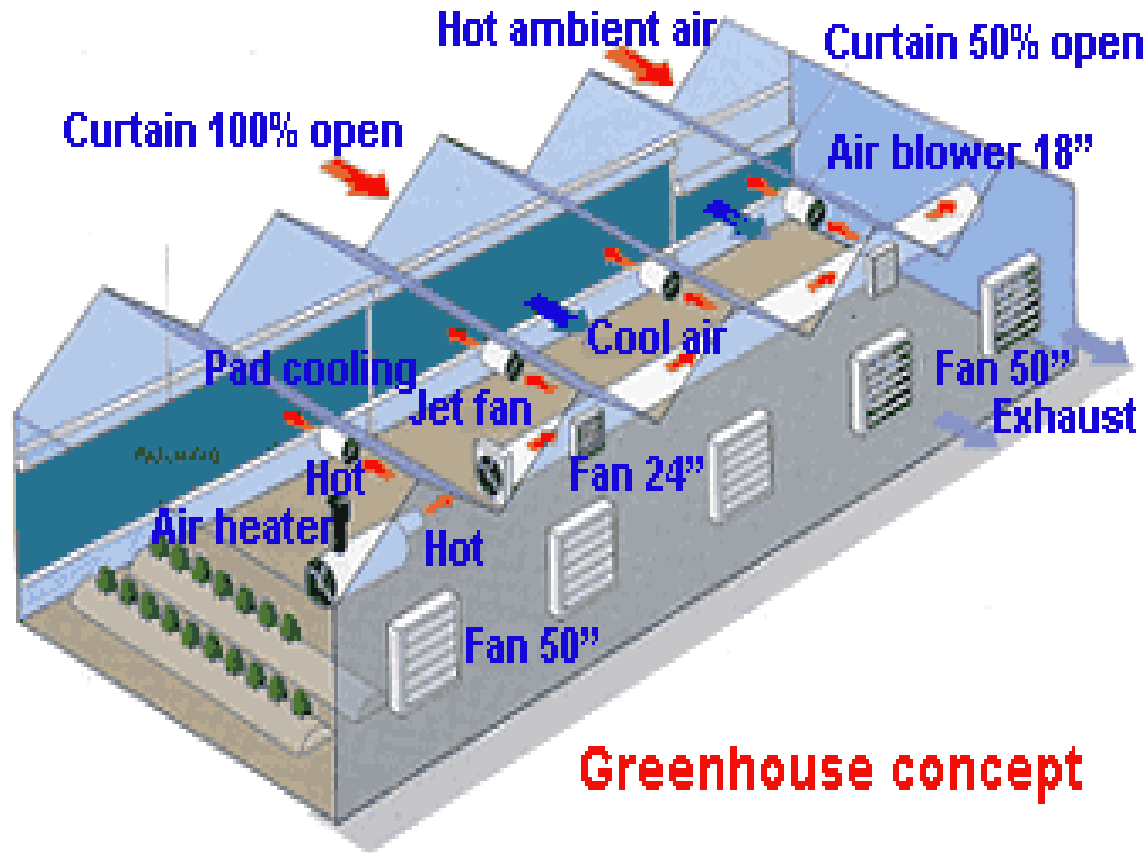
25 % Increase in Chicken House Capacity



Temperature
reduction up to

15 degrees

- Provides the ultimate humidity levels for the healthy growth of agricultural crops



Greenhouse concept

Green Houses

This allows :

- ✓ **365** days of on going production for agricultural crops.

- ✓ Increase in greenhouse capacity by **40%**

- ✓ Reduce the application of pesticides

- ✓ Increase humidity levels

- ✓ Increasing fertility of the soil



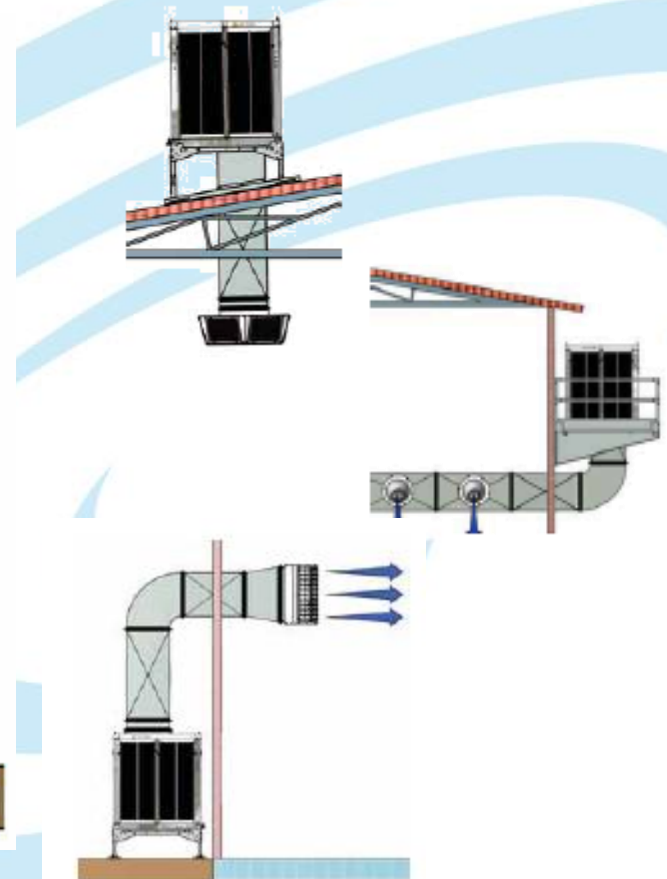
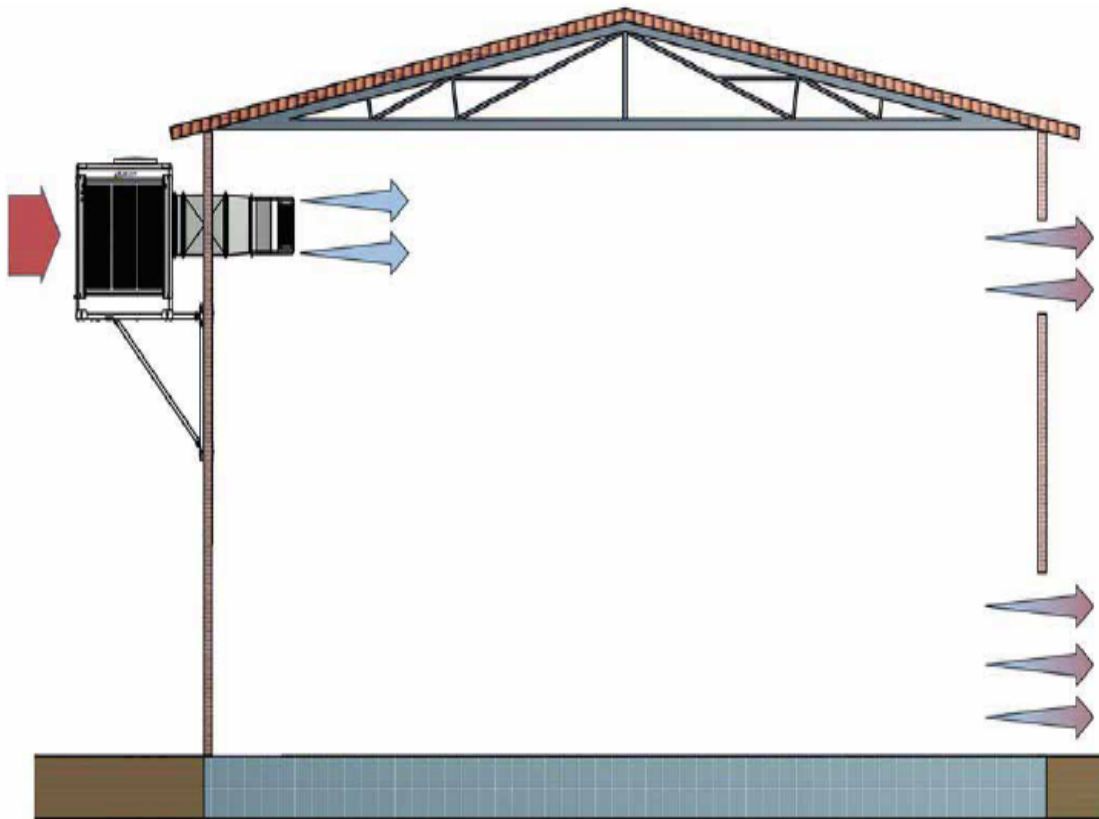
365 Days

On going Production of Agricultural Crops



Factories and Warehouses

Independent Ducted System





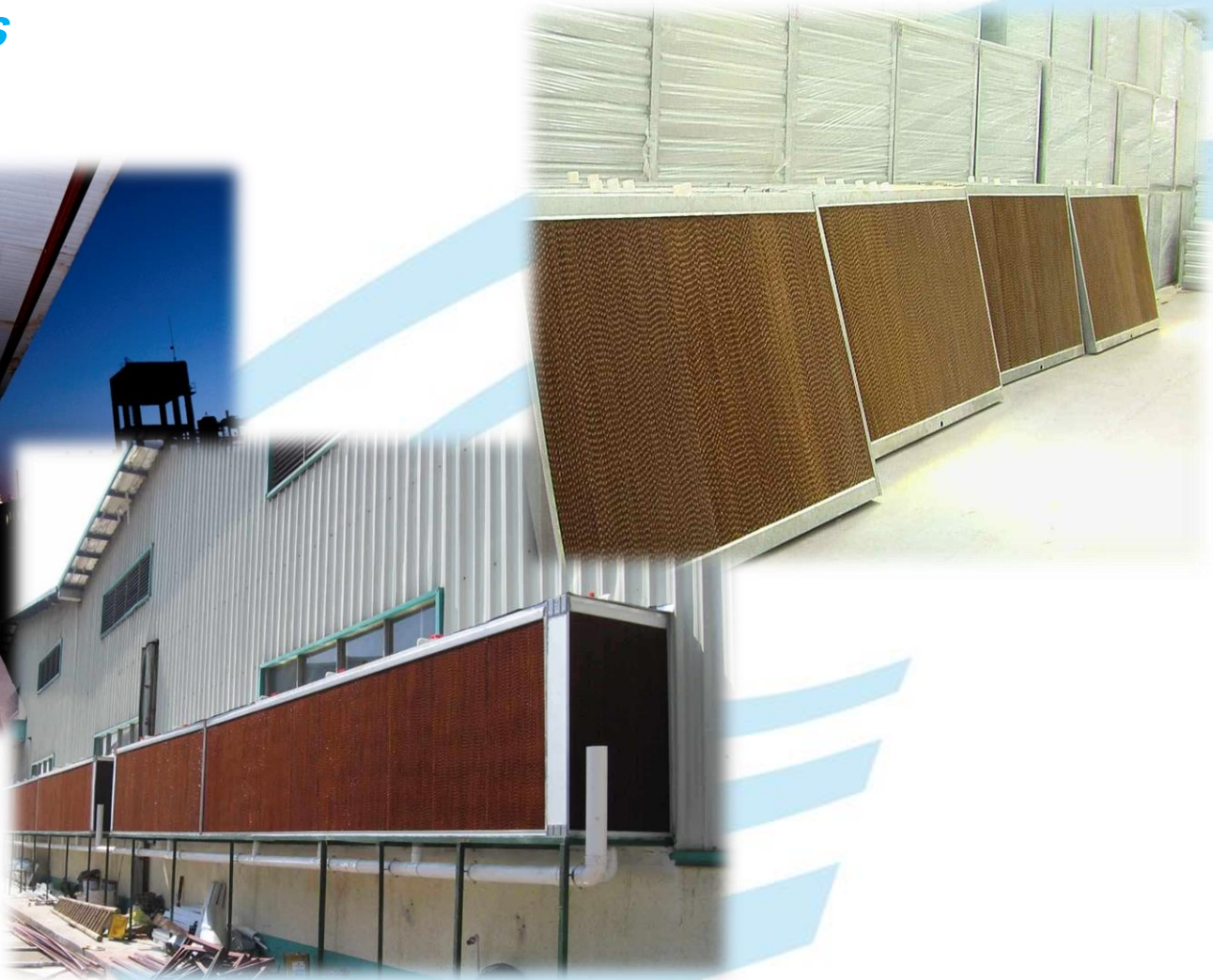
Factories and Warehouses

Independent Ducted System



Factories and Warehouses

Wall-Mounted Coolers





**POULTRY
FARMS**



**GREEN
HOUSES**



**FACTORIES
& STORES**





Thank you