



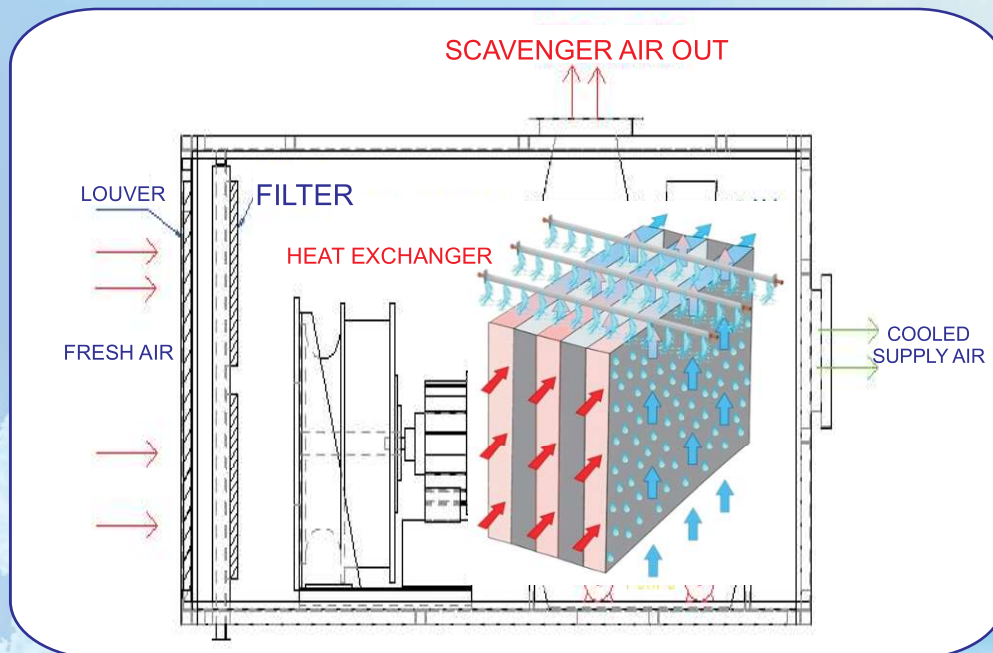
Optimum cooling solutions



**TWO STAGE INDIRECT/DIRECT
EVAPORATIVE COOLING SYSTEMS**

TWO STAGE INDIRECT/ DIRECT EVAPORATIVE COOLING SYSTEM

AARKAYS offers efficiently designed and engineered Two Stage Evaporative Cooling system which works on the Principal Indirect Direct Evaporative Cooling (IDEC).



FIRST STAGE: Sensible Heat Exchanger- Indirect Evaporative Cooling

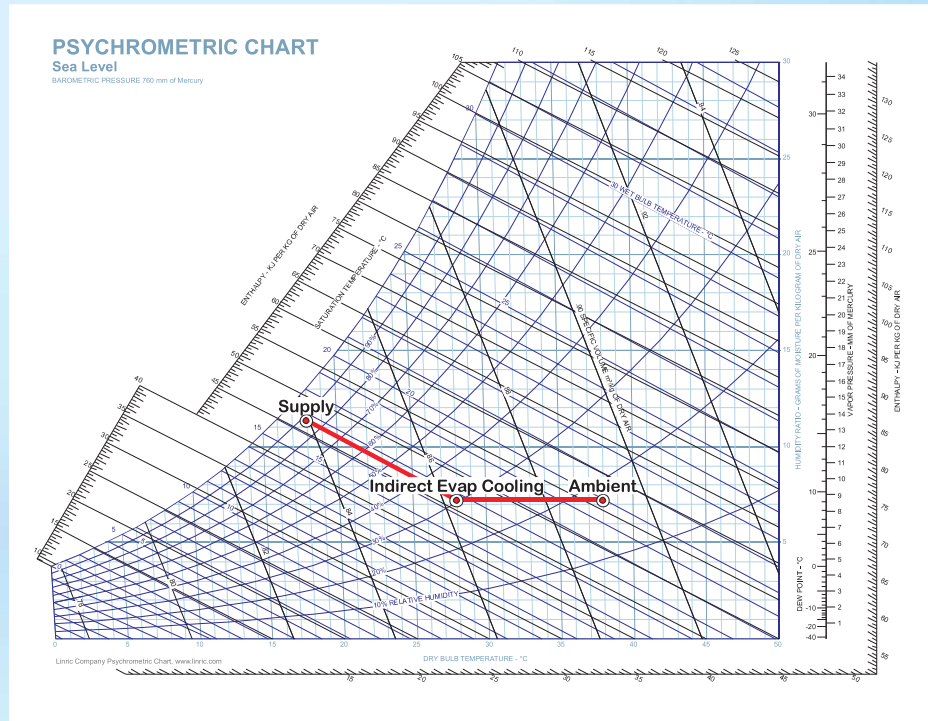
Ambient Air is sucked through a 20/10/5 micron filter across air to air sensible heat exchanger. Heat exchanger has to cross air passes, supply side which is dry and exhaust side which is typically wet for pre-cooling ambient air with water as refrigerant. Hot and dry ambient air is passed through supply side which rejects its heat to the crossed exhaust side plate where raw water is sprinkled. In this stage sensible cooling (reduction in temperature of air) is achieved without adding moisture.

FEATURES OF HEAT EXCHANGER

- Sensible Heat Recovery
- Total Separation of Fresh & Exhaust Air streams complete Joint sealing
- No cross contamination
- Air Leakage less than 0.1% under pressure of 700 Pa
- Anti-fungal, Anti-bacterial coating
- Resistance of pressure difference up to 1500 Pa
- Designed for operating temperatures up to 65 Deg C
- High grade polymer 700 to 1500 GSM
- Vertical or Horizontal construction available
- Custom made size can be available as per design conditions

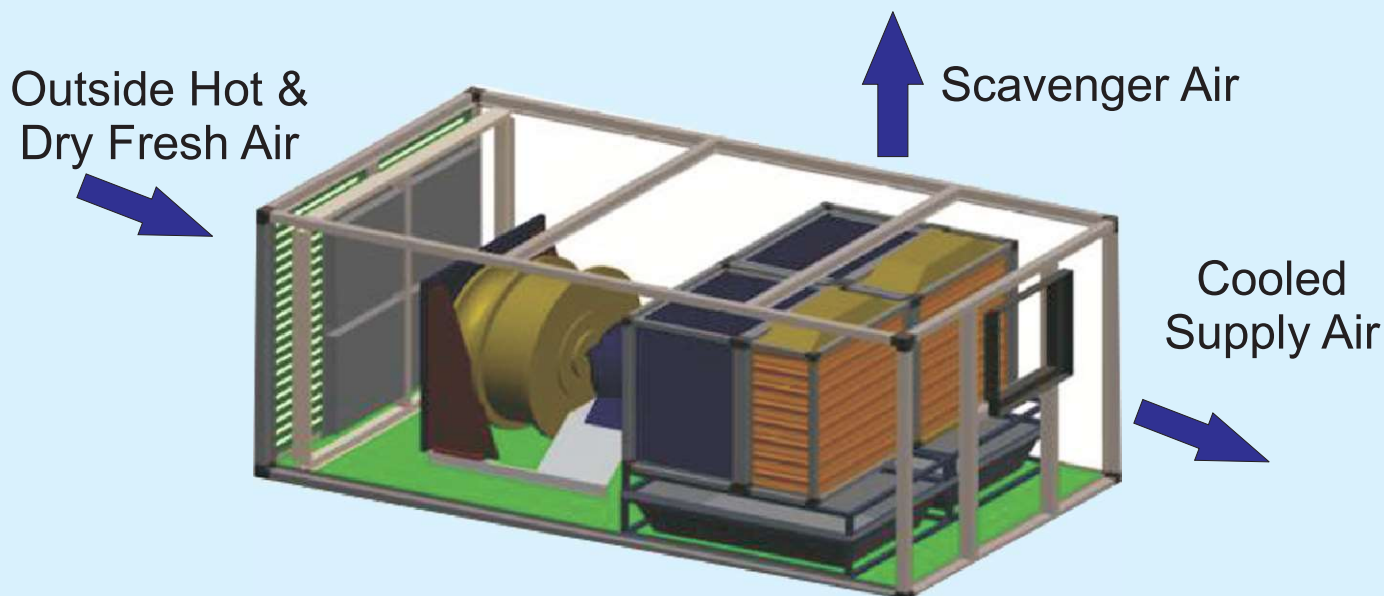
SECOND STAGE: Adiabatic Heat Exchanger- direct Evaporative Cooling

The already cooled air passes from sensible heat exchanger passes through cooling pad, where limited quantity of water help cool the air further. In a design summer ambient conditions, the indirect direct evaporative cooling unit can lower the incoming air temperature below the existing ambient wet bulb conditions.



ADVANTAGES OF TWO STAGE EVAPORATIVE COOLING UNIT

- Provides a cool dry environment
- Consumes low energy approx 30% of conventional Air conditioning system
- Low maintenance no costly repairs
- No Ozone Depleting substances
- No compressors and refrigerants
- High IAQ as no re-circulation of air
- Operates on 100% fresh air
- Ease of installation
- Less air and ducting quantity required to cool the same space
- Considerably lesser moisture addition leading to enhance comfort levels



KEY FEATURES OF TWO STAGE EVAPORATIVE COOLING

RANGE: 1000 to 80000 cfm

CASING: Main frame of self supporting hollow extruded aluminium profile

Thermal break construction available on request

25/50mm thick double skin cfc free PUF injected panels

FAN SECTION: Fan Section is provided with DIDW forward/backward curved/plug fans of Nicotra/Kruger make

WATER SUMP: Stainless steel SS304/FRP lined

FILTERS: Pre filters (10 microns)/Microvee filters(5 microns) Hepa Filters(0.3 microns)

APPLICATIONS

Food Processing Units ■ Manufacturing facilities ■ Community and Marriage halls
 ■ Shopping Mall and complexes ■ Medical and Pharmaceuticals ■ Kitchen & Canteen Halls



AARKAYS AIR EQUIPMENT PVT LTD

(An ISO 9001:2015 Certified Company)

Manufactures of:

Air Handling Units, Air Washer (Air Cooling) Plants, Air Filters, Pharma HVAC Units, Chilling Plants & Air Distribution Products

E-6, Sector-7 Noida(U.P.) INDIA

☎ +91120 4202600, Mob: +91 9818162822

✉ aarkaysair@yahoo.com

🌐 www.airwashermanufacturer.com

