



CLIMATE[®]
TECHNOLOGIES
PVT. LTD.

ADJUSTING ATMOSPHERE



www.pmpclimate.com



About Us

PMP Climate Technologies is a distinguished company engaged in the manufacturing, supplying, and exporting of a broad range of sustainable, energy-efficient HVAC systems. Our offerings include Air Handling Units, Two-stage Evaporative Cooling Systems, Air Washer Systems, Ventilation Systems, Kitchen Scrubber Units, Fan Coil Units, OT Laminar Air Flow Units, and Heat Exchangers suitable for both industrial and commercial applications.

Our comprehensive range of products has earned appreciation from numerous clients in India due to their unrivalled features, including precision performance and prolonged maintenance-free life. Moreover, we cater to our clients' needs by offering the entire range with convenient solutions that address both technical and economical aspects.

Our products are meticulously crafted by a team of field experts who deeply understand various climatic and operational conditions. Our ongoing research and development endeavours continually elevate our designs, enabling us to offer cutting-edge products featuring the latest technology.

At the heart of our company are our qualified engineers, possessing extensive knowledge in management, finance, and over a decade of specialized experience in Climate Control management systems. Their expertise has been pivotal in establishing our strong industry presence.

Under the adept guidance of our Core Team and Partners, our company has flourished. Their transparent and ethical business practices have earned us the trust and confidence of our extensive client base.

OUR OFFERED PRODUCTS

Air Handling Unit

Treated Fresh Air Units

Heat Recovery Units

Ceiling Suspended Units

**Indirect / Direct Evaporative Cooling Unit
(2 Stage Air Washer Unit)**

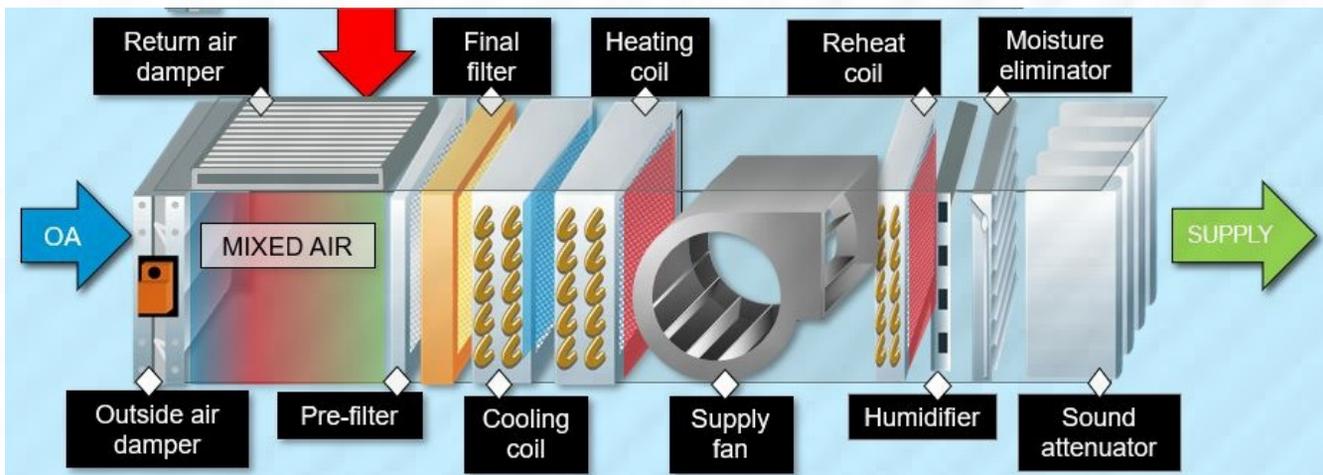
Air Washer Unit

Wet Scrubber Unit

Dry Scrubber Unit

Laminar Air Flow For Operation Theatre

Air Handling Unit (AHU)



Features:

1. Indoor and Outdoor Installation:

These AHUs are designed to be suitable for both indoor and outdoor installation, offering versatility in placement.

2. Eurovent Certified Selection Software:

Utilizes certified selection software for accurate sizing and selection, ensuring optimal performance and efficiency.

3. Multifunctional Capabilities:

Cooling and Heating: Capable of both Cooling and Heating functions to maintain desired temperatures.

Humidification and De-humidification: Offers control over humidity levels for comfort and air quality.

Filter Range: Provides an extensive range of filters to suit different air purification needs.

Key Features of the AHUS:

- Ø Available in various models with air flow rates ranging from 800 CFM to 76,000 CFM, providing options suitable for different space requirements.
- Ø Offered in 25 mm, 45 mm and 50 mm variants with thermal-break options to maximize performance.
- Ø Designed with component flexibility, allowing customization to meet specific requirements or preferences.
- Ø Built with a modular design, facilitating easier assembly and potential modifications for different setups.

Air Handling Unit (AHU)

- Ø Engineered for energy efficiency, promoting cost savings and environmental responsibility.
- Ø Designed for easy installation and maintenance, ensuring convenient serviceability when needed.
- Ø Incorporates features to minimize noise and vibrations, contributing to a quieter and more comfortable environment.
- Ø Prioritizes air quality, enhancing the environment with clean and purified air for occupants.
- Ø Capable of handling static pressures up to 2300 Pa, ensuring efficient airflow in various conditions.
- Ø Undergoes rigorous factory tests and performance tests to ensure quality and functionality before installation.

Components of AHUS:

Fans: Belt driven DIDW centrifugal forward /backward curved fans, Plug fans, EC / EC+, Axial fans.

Motors: IP55 Class F insulated Motors with IE2, IE3, IE4, IE5 efficiency ratings.

Filters: Equipped with high-quality, low-pressure drop filters with various particulate efficiencies.

Heat Transfer Coils: Copper tube aluminium finned heat transfer coils, used for cooling, heating. Also available stainless steel for specific needs for environments requiring corrosion resistance.

Tightness and Corners: Airtight, sturdy extruded aluminium hollow profile framework with thermal break, glass-filled nylon corners, and spacers for durability and insulation.

Dampers: Low-leakage extruded aluminium/GI dampers suitable for manual or motorized operations.

Base Frame: Constructed from robust GI with Powder Coated Finish, with an optional SS base frame.

Inspection Doors/Handles: Adequately sized inspection doors in each section, fitted with high-quality, user-friendly handles for ease of access.

AHU Applications:

Comfort Solutions: Offices, Restaurant, Theatres, Shops

Clean Room Solutions: Pharmaceutical industry, Food processing industry, Hospitals, Laboratories.

Air Handling Unit (AHU)



TREATED FRESH AIR UNIT

Treated Fresh Air Units (TFAs) are essential components of HVAC systems, dedicated to conditioning and delivering fresh air into buildings. These units regulate temperature, humidity, and air quality before introducing fresh air indoors. With integrated filtration, cooling, heating, and optional humidification or dehumidification processes, TFAs ensure optimal indoor air quality and energy-efficient operation, contributing to a healthier and more comfortable environment.



CEILING SUSPENDED AHU

Ceiling Suspended Air Handling Units (AHUs) stand out not only for their efficient air treatment but also for their compact design and minimal noise levels. These units, suspended from ceilings, offer an innovative and space-saving solution while ensuring effective air conditioning and ventilation. Engineered with precision, they incorporate advanced features like filtration systems, heat exchangers, and strategically placed fan units to regulate air quality, temperature, and circulation. Their compact design optimizes space, making them ideal for various commercial, industrial, and institutional settings. Additionally, their low noise operation enhances comfort and productivity within indoor environments.

HEAT RECOVERY UNITS



A heat recovery unit aids in refreshing internal air while simultaneously conserving and reusing energy utilized by air conditioning systems.

Definition:

A heat recovery unit, incorporating a heat exchanger system, aims to recuperate energy by transferring heat from the air extracted from indoor premises to the air expelled outside.

Operation:

Comprising a direct fan, an exhaust system, and a heat exchanger, this unit is contained within a thermally and acoustically insulated structure. The internal air extraction circuit remains separate from the external air circulation, preventing mixing.

Functionality:

By channelling indoor air through the heat exchanger, this system efficiently captures and reuses a substantial portion of the energy utilized for premise conditioning, significantly reducing energy wastage.

Heat recovery units offer several advantages when implemented in buildings:

- Ø Ensures consistent and fresh indoor air circulation.
- Ø Creates a clean and comfortable environment.
- Ø Provides better control over the indoor climate.
- Ø Enhances energy efficiency within the system.
- Ø Contributes to substantial energy savings.
- Ø Lowers overall acoustic disturbance.
- Ø Plays a role in protecting the environment.

The efficiency of a heat recovery unit depends largely on the exchanger type, which commonly includes:

- Back Flooding Aluminium Plate Type Exchanger (Efficiency: 52%-55%)
- Crossed Flow Plates Exchanger (High Efficiency: 54%-75%)
- Rotary Exchanger (High Efficiency: 70%-77%)

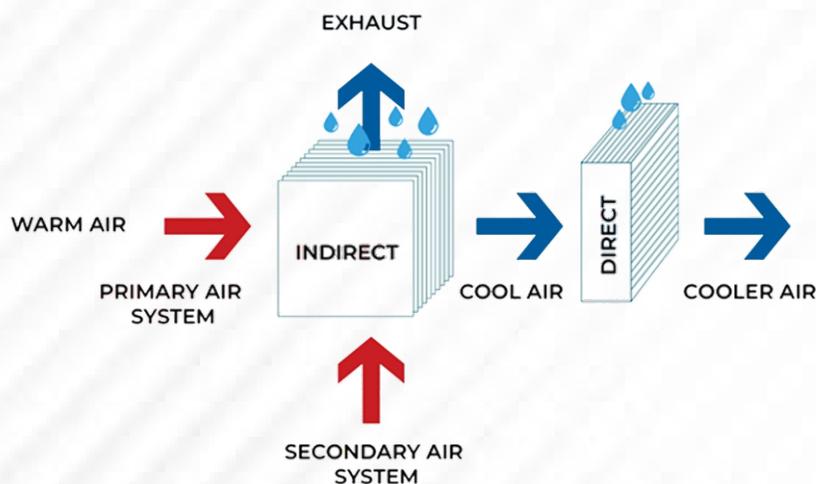
INDIRECT-DIRECT EVAPORATIVE COOLING UNIT TWO STAGE AIR WASHER UNITS



The indirect/direct evaporative cooler leverages 100% fresh atmospheric air to deliver tailored cooling solutions while enhancing Indoor Air Quality (IAQ). This system stands as a reliable and straightforward method to enhance efficiency (COP/EER) through cutting-edge technology, offering a flexible design and customized engineering configurations.

Primarily utilized as a dedicated outdoor air system, it serves both process and comfort cooling needs. In its initial stage, the system employs indirect evaporative heat transfer to cool the incoming air. This stage involves two distinct air streams: the warm and moist working air stream is expelled to the atmosphere, while the resultant cold supply air stream is utilized for process or comfort cooling.

For situations requiring additional cooling or humidity control, the system offers an optional second stage. Here, the already-cooled supply air from the first stage undergoes further cooling and humidification using evaporative techniques. This adaptable two-stage process ensures precise control over cooling and humidity levels to meet specific requirements."



INDIRECT-DIRECT EVAPORATIVE COOLING UNIT TWO STAGE AIR WASHER UNITS

Benefits

- Ø Delivers 100% cooled fresh air, ensuring excellent indoor air quality.
- Ø Provides air at up to 5°C lower temperature compared to direct evaporative coolers.
- Ø Up to 70% lower power consumption than conventional air conditioning systems, resulting in cost savings, reduced carbon footprint, and greenhouse gas emissions.
- Ø Total cooling performance improves in higher ambient temperatures.
- Ø Up to 60% reduction in moisture addition and 30% reduction in water consumption compared to direct evaporative coolers.
- Ø Blow through design for uniform air distribution, optimizing efficiency and preventing blower rust.
- Ø All-weather solution that can operate in IDEC, DEC, or Free Cooling mode.
- Ø They find suitability across a wide range of Applications, including malls, call centres, hotels, hospitals, automotive and engineering industries, chemical industries, textiles, food, plastics, garments, and various other industrial units.

Features:

- Ø Double-skinned AHU type enclosure with PUF insulated panels (25/50mm).
- Ø Penta post construction with Extruded Anodized aluminium profile frame.
- Ø Outer Skin Pre/Powder coated galvanized steel sheet / SS
- Ø Inner Skin Plain galvanized steel sheet. / SS
- Ø Surface treatment can be tailored based on specific requirements.
- Ø Fan Options: DIDW, Plug type, Plenum, EC, EC+, Axial Air.
- Ø Customizable Filtration: Air and water filtration levels can be adjusted as needed.
- Ø Equipped with a water tank, recirculation pump, UPVC pipes, and fittings.
- Ø Available in different sizes with an air flow range of 2000 CFM to 60000 CFM.
- Ø Custom sizing for higher flow ranges can be accommodated.
- Ø A fully automatic PLC-based control panel offers precise, customized, and efficient management of IDEC functions.

Ambient Temp (C)	Relative Humidity (RH)								
	10%	20%	30%	35%	40%	45%	50%	55%	60%
Machine Outlet Temp (C)									
28	7.7	11.9	13.9	15.3	16.5	17.7	18.9	20.0	21.0
30	8.6	13.2	15.3	16.7	18.1	19.3	20.5	21.7	22.8
32	9.6	14.5	16.7	18.2	19.6	21.0	22.2	23.4	24.5
34	10.6	15.8	18.2	19.8	21.2	22.6	23.9	25.2	26.3
36	11.6	17.1	19.7	21.3	22.8	24.3	25.6	26.9	28.1
38	12.7	18.5	21.1	22.8	24.4	25.9	27.3	28.7	29.9
40	13.7	19.9	22.6	24.4	26.1	27.6	29.1	30.4	31.7
42	14.7	21.2	24.1	26.0	27.7	29.3	30.8	32.2	33.5
44	15.8	22.6	25.6	27.6	29.3	31.0	32.5	34.0	NA
46	16.8	24.0	27.2	29.1	31.0	32.7	34.3	NA	NA
48	17.9	25.4	28.7	30.7	32.6	34.4	NA	NA	NA

AIR WASHER UNITS



Air washers, utilizing water evaporation, offer reliable and efficient cooling by circulating cooled air through GI ducts and grills using a blower. They introduce 100% fresh air, maintaining moisture and increasing cooling efficiency as temperatures rise. Compared to air conditioners, air washers are more economical, reducing running costs by 90% while ensuring better air quality.

Ideal for various settings including malls, call centres, hotels, hospitals, automotive and engineering industries, chemical industries, textiles, food, plastics, garments, and other industrial units

WET SCRUBBER UNIT



Wet scrubber units are essential components in air purification systems, effectively removing pollutants and contaminants from industrial exhaust gases. These units utilize a wet process to clean and purify air by directing it through a scrubbing solution, which captures and neutralizes harmful substances present in the gas stream. These pollutants are dissolved or chemically reacted with the liquid, significantly reducing emissions before the air is released into the environment. Wet scrubber units play a crucial role in mitigating air pollution and maintaining cleaner air in various industrial sectors, including manufacturing, chemical processing, and environmental control applications.

DRY SCRUBBER UNIT



A Dry Scrubber combined with an Electrostatic Precipitator (ESP) for kitchen exhaust serves as a powerful purification system. The Dry Scrubber component utilizes a solid sorbent to chemically react with contaminants, while the ESP employs an electrostatic charge to capture finer particles like grease, smoke, and Odors present in the exhaust. Together, this integrated system effectively eliminates a wide range of pollutants, ensuring cleaner emissions and improved air quality in kitchen environments. This combined approach offers comprehensive purification, reducing environmental impact and meeting stringent air quality regulations in commercial kitchens and food processing facilities.

LAMINAR AIR FLOW (HEPA Tent) FOR MODULAR OT



Laminar Air Flow systems, often referred to as HEPA Tents, are specialized setups designed for Modular Operating Theatres (OT). These systems create a controlled environment by directing filtered air in a unidirectional flow, maintaining a sterile and particle-free zone crucial for surgical procedures. HEPA (High Efficiency Particulate Air) filters within these tents remove airborne particles, ensuring a clean and sterile atmosphere essential for reducing the risk of infection during surgeries. Laminar Air Flow systems for Modular OTs are integral in upholding strict hygiene standards and minimizing the chances of post-operative complications by providing a meticulously controlled and purified environment for surgical interventions.

Our Valuable Clients





Survey No:545/1, Nana Fofadiya, Near NH No-8, Dist. - Vadodara, Gujarat 391210



+91 2666 299 452 / +91 9825489117 / 8866464568



info@pmpclimate.com • pmpclimate@gmail.com



www.pmpclimate.com

FOLLOW US

