

TFA with Plate Type Heat Exchanger (PHE)



Our TFA with Plate Type Heat Exchanger (PHE) is engineered for modern ventilation needs, delivering fresh, treated air with high thermal efficiency and zero cross-contamination. Designed for hygienic environments, it offers energy savings of up to 75% through air-to-air heat recovery, ensuring indoor air quality (IAQ) compliance and comfort while minimizing energy load. A perfect fit for commercial, institutional, and industrial buildings aiming for performance and sustainability.

Features

- Air-to-air heat recovery using cross-flow or counter-flow aluminum plates
- Recovers 60–75% sensible heat, reducing cooling/heating load significantly
- Delivers fully treated outdoor air, compliant with IAQ and ventilation standards
- No Cross-Contamination

Benefits

- Energy Efficiency
- Improved Indoor Air Quality (IAQ)
- Low Maintenance Costs
- Hygienic & Contamination-Free
- Compact & Space-Saving
- Environmental Compliance
- Quiet Operation
- Cost-Effective

Product Technical Specifications – Product Range

1. Airflow Capacity:

- Ranges from 1,000 CFM to 60,000+ CFM

2. Filtration:

- G4 (pre-filter), F7–F9 (fine filter)

3. Fan Section:

- EC / backward curved centrifugal / plug fans
- VFD compatible



4. Cooling / Heating Coils:

- Copper tubes with aluminum fins
- Chilled water / DX / electric heating coils

5. Heat Exchanger Type:

- Plate type (cross-flow or counter-flow)

6. Heat Recovery Efficiency:

- Up to 60–75% sensible heat recovery



7. Motor Efficiency

- IE3 / IE5 compliant energy-efficient motors

8. Accessories:

- UV-C lamps, differential pressure gauges, CO₂ sensors, fresh air dampers.

Product Construction Details

1. Casing/Frame:

- Rigid, galvanized or powder-coated steel Stainless Steel, Aluminium
- Modular, double & single skin panel construction
- Extruded Aluminium Profile Frame Work (Thermal break & Non-Thermal break)

2. Insulation:

- 25 mm to 50 mm thick insulation (Density-40 kg/m³ (48 kg/m³, 64 kg/m³, 96 kg/m³ - Optional) (PUF, Glasswool, Rockwool, PIR)
- Provides thermal insulation and acoustic insulation

3. Base Frame:

- Heavy-duty steel or aluminum base
- Designed for floor mounting and vibration isolation

4. Panels:

- Removable or hinged access doors
- Inner skin: galvanized steel (pre-coated or powder coated), stainless steel, aluminium
- Outer skin: pre-coated, powder-coated steel, stainless steel, aluminium

5. Drain Pan:

- Sloped stainless steel design
- Anti-corrosive and insulated to prevent condensation buildup

6. Fan Section:

- EC or VFD-driven centrifugal fans
- Mounted on vibration-absorbing platforms
- Dynamically balanced for low-noise, high-efficiency airflow

7. Coil Section:

- Copper tubes with aluminum fins
- Housed in corrosion-resistant frames with drain connections

8. Filter Section:

- Pre-filters in slide-in frames
- Fine filters, HEPA filters, Carbon filters, Chemical Filters, Electronic Air Cleaner
- Easy access for replacement

9. Optional Add-ons:

- UV-C germicidal lights
- CO₂ sensors, differential pressure gauges
- Fresh air intake louvers with bird/insect screens

Product Certifications

1. Eurovent Certified : (Standard EN 13053 & EN 1886)

- Casing strength class : D1
- Casing air leakage class at -400 Pa : L1
- Casing air leakage at +700 Pa : L1
- Filter bypass leakage class : F9
- Thermal transmittance class : T2
- Thermal bridging factor class : TB2



2. AHRI Certified : Standard 1350

- Casing Deflection Rating Class (Positive) : CD4
- Casing Deflection Rating Class (Negative) : CD4
- Casing Air Leakage Class (Positive) : CL2
- Casing Air Leakage Class (Negative) : CL2
- Thermal Transmittance Class With Leakage : CT2
- Thermal Transmittance Class Without Leakage : CT2
- Thermal Bridging Class : CB2



3. CE Certified : (EN ISO 12100:2010, EN 60204-1:2018)

4. ISO Certified : (ISO 9001:2015)

5. AHRI Certified Chilled Water Coils : AHRI Standard 410

6. AHRI Certified Hot Water Coils : AHRI Standard 410

Applications



Healthcare / Hospitals



Entertainment Venues



Food & Beverage Industry



Commercial Buildings



Educational Institutions



Retail & Malls



Data Centers & Server Rooms



Industrial & Manufacturing



Hotels & Hospitality



Laboratories

Our Presence



Sales & Support Offices

Ahmedabad | Bengaluru | Chennai | Delhi | Gurgaon | Hyderabad | Jaipur | Kanpur | Kolkata | Mumbai | Pune

Corporate Office

Gurugram

DLF Corporate Greens,
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Southern Peripheral Road,
Sec - 74A, Gurugram -
122004, Haryana

Manufacturing Facilities

Haryana

O-1, O-5 and O-3/A,
Old Industrial Area,
Bahadurgarh-124507
Haryana, India

Maharashtra

343 & 343/1/A,
Village Lahe, Mumbai-
Nashik Highway,
Taluka Shahpur,
Thane - 421603

Karnataka

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