



*Optimum cooling solutions*



# **AIR HANDLING SYSTEMS**

**for pharmaceutical industries  
research laboratories  
clean rooms & hospitals**



# DOUBLE SKIN AIR HANDLING UNITS (AHU)

AARKAYS offers efficiently designed and engineered Double Skin Air Handling Units for pharmaceutical industries, research laboratories, research institutes, hospitals, operation theaters and other clean-room applications.

## APPLICATION

CLEAN ROOMS  
CONCENTRATES  
INJECTABLE UNITS  
LIQUID UNITS  
CAPSULE SECTION  
TABLET SECTION  
DRY SYRUP SECTION  
OPERATION THEATRE



## SPECIAL FEATURES

**FRAME WORK:** Extruded Aluminium profile with nylon reinforced 3D corner joints used to house all internal components. Thermal break construction available as option.

**FRAME PANELS:** Double Skin sandwiched panels fabricated out of CFC / HFC free PUF injected 25 / 43 / 50 / 75 mm thick panels. Various skin option available in plain GSS, prepainted GSS, preplasticised GSS, Aluminium, Stainless steel as per customer's requirements.

**FAN SECTION:** Fan Section contains belts driven DIDW Forward / Backward / Aerofoil Backward curved Centrifugal Blower & direct driven Plug Fans as per requirement.

**FAN/MOTOR ASSEMBLY:** Fan and Motor assembly mounted on common base frame of Extruded Aluminium Profile on Spring type vibration isolators.

**COIL/HEAT EXCHANGER SECTION:** Cooling Coil (Chilled water/DX), Hot water and Steam coils are made of copper pipe (9.5, 12.7 or 15.8 MM dia) and Aluminium fins of thickness 0.10 to 0.15 mm.

**DRAIN PAN:** Drain pan fabricated out of Aluminium / Stainless steel sheet duly insulated with 10 mm thick nitrile insulation sheet.

**PRE FILTER (EU-3/G3, EU-4/G4):** Pre filters are provided of efficiency 90 % down to 10 microns.

**MICROVEE (FINE) FILTER (EU-7/F7, EU-8/F8):** Microvee filters are provided of efficiency of 99% down to 5 or 3 microns particle size.

**HEPA FILTER (EU-13/H13):** Hepa filter with efficiency of 99.97% down to 0.3 microns particle size and are normally installed at duct outlet terminals.

**MIXING BOX SECTION:** Mixing box are provided complete with Supply and return air dampers to control the air flow of Return and Fresh air in the system

**AIR FLOW RANGE:** Our standard ranges are from 400 to 15000 CFM.  
Higher capacities of units are also available.

**TOTAL STATIC PRESSURE:** Static pressure varies from 40 to 200 mmwg depending upon the stages of filtration and pressure drop across the systems.



# AIR COOLED CONDENSING (OUTDOOR) UNITS

## SPECIAL FEATURES

**NOISE FREE OPERATION:** AARKAYS Condensing Units employ technology advanced scroll compressors that are more silent than other compressors in comparison.

**ENERGY EFFICIENT:** High energy efficient scroll compressors offer fast & efficient cooling at lower power consumption.

**PROTECTION INBUILT:** Internal pressure release valve provides high pressure protection to refrigerant system.

**DURABLE:** Fewer moving parts in a scroll compressor as compared to in an even sized reciprocating compressor adds to the durability of the system with minimum maintenance.

**STURDY & LASTING CONDENSING UNIT:** Higher gauge of galvanised steel body duly powder coated ensures protection from rust and thus longer body life.



## AIR FILTERS

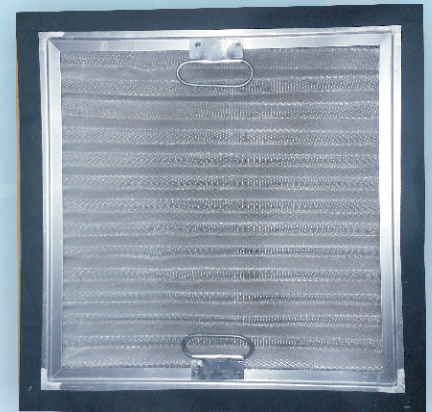
### TYPES

**PRE FILTERS:** Pre Filters are high loft (high dust holding capacity) non woven synthetic media filters and are available both in G3 and G4 (EU - 3 and EU - 4) categories.

**MICROVEE / FINE FILTERS:** Aarkays make F-5/ F-6/ F-7/ F-8 (EU-5/EU-6/EU-7/EU-8) fine filters are made of synthetic non woven media.

**HEPA FILTERS DEEP PLEAT:** Aarkays Hepa Filters are really absolute filters with efficiency >99.97% at 0.3 micron. Filters are individually point to point scanned for media integrity and DOP tested for its overall efficiency. Filters are available in Aluminium/ SS constructions.

**HEPA FILTERS MINI PLEAT:** Aarkays manufactures Mini Pleat Hepa Filters on state of the art Mini pleating machine with hot melt glue separators (Filters with concealed separators are also available).



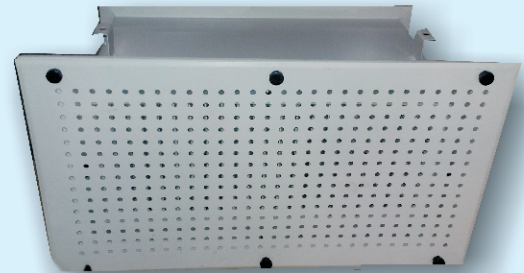
# TERMINAL HEPA MODULE

## Description

The HEPA Terminal Module is an ideal for pharmaceutical and biotechnology facilities or for any other facility requiring clean-room level air filtration. It is designed in such a manner that HEPA filters can be replaced and tested without disturbing the module housing.

## Standard Features

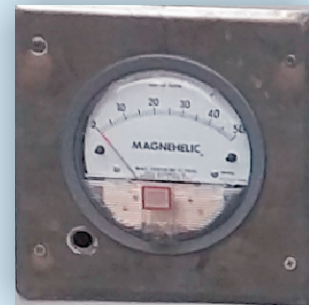
- Galvanised housing fully powder-coated in standard RAL colours.
- Stainless Steel (SS-304) fully welded HEPA filter retaining assembly.
- Airflow perforated distribution plate located on inlet to disperse air uniformly across HEPA filter.
- Includes a static pressure port for evaluating HEPA filter pressure drop or sampling of the upstream aerosol concentration during filter scan testing.



# SS BOX MAGNEHELIC GAUGE

## Description

Stainless Steel (SS-304) Magnehelic Gauge box has a polished satin finish. This box has a hinged door with a phase cutout to accept a Dwyer magnehelic pressure gauge. Box comes complete with holes to accept pressure differential sensors. Box is fabricated with a flanged face for recess mounting.



## 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

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