Modular Air Handling Unit

50/60 Hz

Air flow: 1100 m3/h - 124000 m3/h

D-AHU Professional

D-AHU Professional Air Handling Units is the synthesis of more than 50 Years of Daikin European AHU Manufacturing experience. Daikin has taken a major step in redefining the Air Handler offering with the D-AHU range. Demands for improved indoor air quality, low sound, high operating efficiency, and smaller mechanical rooms require a better product for today's AHU market, Daikin D-AHU Professional range handler is designed to meet or exceed these demands.

The key to providing such a high-quality product is in the basic design. Daikin D-AHU Range construction provides unequaled thermal efficiencies and low leakage rates. In addition, D-AHU range offer tremendous flexibility in sizing, component options, and unit arrangements to meet the indoor air quality, operating efficiency, sound, and installation requirements for today's extensive residential, commercial, and custom markets.

Why choose Daikin Air Handling Units?

- Maximum energy efficiency and indoor air quality
- Wide range of functions and options
- High quality components
- Innovative technology: Unique features and state of the art technology for short payback
- Operation efficiency and energy savings
- Outstanding reliability and performance
- Wide range of applications including Comfort air conditioning, industry-type process cooling, Data centers
- Plug and play concept for easy installation and commissioning.
- Unique Daikin fresh air package available for connection of AHU to VRV

Our unique quality is accomplished by

Panel
- Prepainted outer panel meeting 1000 hrs Salt Spray test (ASTM B-117)
- The inner panel made of G90 galvanized steel.
- Best in class Eurovent Certified Casing Strength

Gasket
- Access doors with Liquid gasket technology drastically reduces unit air leakage.

Frame
- Profiles made of extruded aluminium offering better corrosion resistance.
- Unique Daikin thermal break design with 35mm or 27 mm Polyamide bars on profile.
- Distinctive Section to section thermal break profile to ensure thermal break design on the whole unit.
- Rounded profile for increased ease of cleaning.

IAQ
- Low leakage casing construction
- Flush internal surface and rounded corner flush surface to avoid the retention of dirt and to be easily cleanable.
- Wide filtration possibility to reduce pollution.

Plug & Play Controls
- Pre-commissioned and Factory-tested controls for quicker on-site commissioning
- Factory mounted Sensors and Pressure measurement devices

We make it in Saudi Arabia

Daikin KSA factory located in Sudair Industrial City, 150 km from Riyadh was established to:

- Offer Latest technologies and innovations based on the local market requirements.
- Better support national energy efficiency and sustainability goals while creating vital job opportunities and supporting the kingdom's economic growth.

The factory has several international certifications, including ISO 14001, 9001, 45001, and Eurovent.

Sizes

D-AHU is sized according to following criteria.

Predefined Sizes

Twenty-Seven Predefined sizes, from 850mm to 5,990mm width and height from 550mm to 3,000 mm

Infinitely Variable Sizes

- Designed to overcome installation constraints where space requirements of the section
- "Width x Height" must adapt to the available space. The system gives the possibility to tailor the unit sizes through increments/decrements of 5 cm.

The size can be selected by choosing the unit in relation to the Air velocity through the coil surface. The 27 Predefined sizes, considering an Air velocity of 2.5 m/s through coil surface, cover an airflow range of 1100 m3/h - 124000 m3/*h*.

Size	Air flow capacity [m^3/h] (Coil Face Velocity 2.5 m/s)	Height [mm]	Width [mm]
1	1,105	550	850
2	1,550	600	900
3	1,980	650	950
4	2,600	780	1,000
5	3,170	780	1,150
6	3,550	800	1,150
7	4,000	800	1,250
8	4,800	850	1,300
9	5,560	900	1,350
10	6,600	900	1,550
11	7,950	1,100	1,550
12	9,320	1,100	1,650
13	10,050	1,150	1,650
14	13,200	1,400	1,850
15	19,200	1,500	2,100
16	25,300	1,580	2,650
17	31,500	1,750	2,750
18	37,000	1,800	3,240
19	43,400	2,100	3,090
20	51,300	2,250	3,340
21	58,000	2,250	3,820
22	67,500	2,400	4,040
23	78,000	2,450	4,490
24	84,700	2,700	4,490
25	98,000	2,850	4,890
26	111,000	2,850	5,490
27	124,000	3,000	5,990

Casing Construction

AHU Frame

- AHU Profile made of extruded aluminum alloy
- Profiles internally rounded (10 mm) ensuring that frame is flush with the internal housing surfaces and completely smooth to avoid dirt accumulation and guarantee excellent cleanability.
- AHU Profiles are the double chamber type so that the fasting screws are totally concealed with in the profiles and do not project inside the AHU casing.
- AHU structure is completed with three-way connecting corners made of glass-reinforced nylon placed on the corners. Unit base, independent for each section is made of Galvanized steel base frame with Minimum height 100 mm.
- Optional items:
  a. Thermal break construction with 35mm or 27mm polyamide bars on profile.
  b. Base frame height – 120mm, 150mm.
  c. Welded base frame.
  d. Powder coated flat or sloped roof.

Fig 1: Internally Rounded Profile

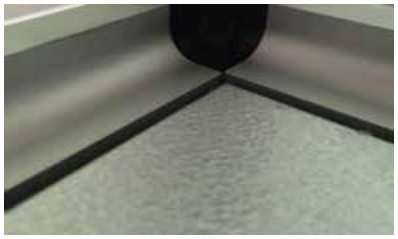

Fig 2: Flush Inner Surface

Fig 3: Nylon Corner

Fig 4: Flat roof

AHU Panels

- Double skin casing made of 42 / 62 mm thick PIR insulation (Polyisocyanurate insulation) CFC free sandwiched between 0.7 mm thick powder coated Steel outer skin and 0.5 mm thick GI inner skin.
- The double skin casing is made of step type panels to obtain a flat surface inside the unit, ensuring continuity between the panel and the profile.
- PIR insulation with overall density of 40-42kg/m^3 and thermal conductivity of 0.02W/m °K
- Precoated external skin conforming to 1000 hrs salt spray tested in accordance with ASTM B-117
- The Panels are held to the Frame by self-drilling screws. The Screws remain inside the profile and not exposed to both inside and outside air.
- The sound absorption through the panel with PIR insulation is Eurovent certified conforming to the values:

Model Box	Hz	Hz	Hz	Hz	Hz	Hz	Hz
	125	250	500	1000	2000	4000	8000
Energy TermiC0 S2	6	10	14	11	15	32	37
Energy TermiC0 F2	8	7	13	13	14	30	40

- Grooves or Gaps inside the unit is sealed properly with silicone.
- Optional Items:
  - Insulation – Mineral Wool (MW) with 70-80 kg/m3 density and thermal conductivity of 0.047 W/m^0K.
  - The sound absorption through the panel with MW insulation is Eurovent certified conforming to below values:

Model Box	Hz	Hz	Hz	Hz	Hz	Hz	Hz
	125	250	500	1000	2000	4000	8000
Sound TermiC0 S2	11	13	19	18	21	31	38
Sound TermiC0 F2	10	11	17	20	18	31	43

  - Skin Type – SS 304, SS 316, C5 Coating, Anti-microbial Coating.
  - Skin Thickness – 1.0, 1.2 & 1.5mm.

Component Features

Access Section /Doors

- Access doors construction same as AHU casing and assembled to the profiles by using painted aluminum hinges.
- Access door provided with continuous liquid injection foam gasket.
- Access doors provided with Nylon reinforced fiberglass external handles.
- Access door handle roller cam made of steel shafts and roller in glass fiber reinforced Polyamide material.
- Safety stop provided for access door handles of fan sections with positive pressure.
- Optional Items:
  - 200mm diameter view port made of double panel poly carbonate material.
  - Bulkhead lamps fixtures with IP66 construction and IP55 on/off switches installed on the AHU's outer wall.

Fig 6: Hinged Access Door with View port

Fig 4: Handle Roller Cam

Fig 5: Lamp

Fig 7: IP55 Switch

Dampers

- Dampers provided for Mixing Section, Inlet Section and Outlet section as required
- Damper construction in aluminium with airfoil profile blade (opposed).
- Damper casing fabricated of Aluminium with nylon gear system enclosed in the shoulder profile
- Damper blade edges sealed across with EPDM gasket to minimize air leakage between the blades
- Low leakage dampers, Class 2 leakage when tested in accordance with EN 1751
- Optional items:
  - Modulating and on/off actuator
  - Aluminum hand quadrant

Fig 8: Actuator mounted

Fig 9: Inlet Section with Dampers

Filters

Prefilter

- Efficiency ISO coarse 60% as per ISO 16890 & G4 as per EN779.
- Filter sizes in accordance with EN 15805 with a depth of 48mm.
- Pleated Synthetic Filter Media with densely bonded structure.
- Media frame made of galvanized steel construction and bonded to the entire periphery of the media pack to prevent air bypass.

Fig 10: Prefilter

Soft Bag Filters

- Wide range of efficiency based on particle size as per ISO 16890 (ePM10, ePM2.5, ePM1).
- Filter sizes in accordance with EN 15805 with a depth of 510mm (Other depth is available as optional).
- Filter media made of high loft layered melt brown synthetic media that is non-shedding and water resistant (fiberglass media is available as optional).
- Ultrasonically welded pocket configuration guarantees complete pocket inflation and eliminates leakage.
- Individual pockets are mechanically attached to rigid Metal Header

Fig 11: Bag filter

Rigid Bag Filters

- Wide range of efficiency based on particle size as per ISO 16890 (ePM10, ePM2.5, ePM1).
- Filter sizes in accordance with EN 15805 with a depth of 290mm.
- Filters consist of 8 pleated media packs assembled into 4 V-banks within a totally plastic frame.
- Filter media made of micro glass fibers with a water repellent binder. Dual density media construction, with coarser fibers on the air entering side and finer fibers on the air leaving side.
- Media pleated with separators made of continuous beads of low-profile thermoplastic material.
- Media Frame and the center support members made of high impact polystyrene.
- Media packs bonded to the structural support members at all points of contact, to improve rigidity and eliminate air bypass.

Fig 12: Rigid Bag filter

HEPA Filters

- Available in Wide range of efficiency, H13/H14 as per EN1822.
- Multiple mini-pleat media packs, assembled into a series of V-banks, permits substantially more media to be contained in the filter. Maximum effective media area provides greater airflow capacity, low resistance, high dust holding capacity and unusually long service life.
- The filter media is made from sub-micron glass fibers formed into a high-density paper. Glass filament separators are used to form the media into mini-pleat panels that withstand high velocity airflow.
- Extruded aluminum frame with higher corrosion resistant and high strength and are lighter. Cell sides made from single extrusion to maximize construction integrity.
- Optional Filters & Items:
  - Carbon Canister Filters
  - Carbon V-Bank Filters
  - Electrostatic Filters
  - Filter monitoring
    - pressure tapping points
    - Magnehelic Differential pressure gauge

Fig 13: HEPA Filter

Fig 14: Carbon Canister

Fig 15: Electrostatic Filter

Fig 16: Magnehelic Gauge

Fig 17: Carbon V-Bank

Filter Frame

- Filter Frame fabricated of galvanized steel.
- Side withdrawal Filter frame available for filter efficiency up to F7, above which Front withdrawal frame is used.
- Front withdrawal arrangement with proper spring-loaded fixing arrangement to ensure filters are held to the frame during unit operation.
- Optional item: Filter Frame in stainless steel

Fig 18: Filter Frame Front Withdrawal

Fig 19: Filter Frame Side Withdrawal

Coil

Chilled Water-Cooling Coil

- Coils designed, rated, and certified in accordance with AHRI 410.
- Chilled water-cooling coils fabricated from heavy gauge copper tubing of ½" or 5/8" diameter expanded into aluminum fins to give a mechanical bond.
- Cooling coil copper Tube thickness 0.36 mm or 0.40 mm.
- Aluminum fins with a thickness of 0.10 mm provided, minimum fin spacing of 2.0mm for the cooling coil design.
- Coil Headers made seamless copper tubing with external screw threads. Fittings include plugged vent and drain taps
- Coil frame made of galvanized steel with a minimum thickness of 1.5 mm.
- Coils in contact with direct outside provided with anti-corrosive coating on the complete coil including end plates.
- Coils shall be leak tested according to European directive PED 97/23 CE at 24 bar.
- Coils mounted on sliding rails for easy removal through the unit casing.
- Coil header connection through panels equipped with airtight seals.
- Drain pans shall be internal and made of pre-painted galvanized steel placed under the coil within the coil section.
- Three slopped Drain pan with drain connection located at the lowest point to ensure proper condensate drainage, extending at least 100mm in the direction of airflow.

Fig 20: Coils with Herasite Coating

Fig 21: Coils Mounted on Slide Rail for Easy removal

DX-Cooling Coil

- DX cooling coils fabricated from heavy gauge copper tubing of 3/8" diameter expanded into aluminum fins to give a mechanical bond.
- Cooling coil copper Tube thickness 0.36 mm.
- Aluminum fins with a thickness of 0.10 mm provided, minimum fin spacing of 2.0mm for the cooling coil design.
- Coil Headers made seamless copper tubing with external brazed connection.
- Coil frame made of galvanized steel with a minimum thickness of 1.5 mm.
- Coils in contact with direct outside provided with anti-corrosive coating on the complete coil including end plates.
- Coils shall be leak tested according to European directive PED 97/23 CE at 30 bar.
- Coils mounted on sliding rails for easy removal through the unit casing.
- Coil header connection through panels equipped with airtight seals.
- Drain pans shall be internal and made of pre-painted galvanized steel placed under the coil within the coil section.
- Three slopped Drain pan with drain connection located at the lowest point to ensure proper condensate drainage, extending at least 100mm in the direction of airflow.
- Optional Items:
  - Fins: Copper
  - Coil Frame: SS304 stainless steel / 316 stainless steel
  - Drain Tray: SS304 stainless steel / 316 stainless steel
  - Moisture eliminator

Fig 22: DX Coil

Fig 23: Moisture Eliminator

Fans

Forward Curved/Backward Curved/Aerofoil Fans

- Housing made of Hot Dipped Galvanized steel sheet. Side plates including the inlet cones are designed to achieve best aerodynamics for air inlet.
- The scroll is fixed to the side plates by spot welding or "Pittsburg seam locking" method.
- Forward Curved Impeller made of hot dipped galvanized steel sheet with advanced aerodynamic profile to achieve the highest efficiency and the lowest noise level.
- Backward Curved Impeller made of hot dipped galvanized steel sheet (Coated) with advanced aerodynamic profile to achieve the highest efficiency and the lowest noise level.
- Fan Wheels balanced to ANSI/AMCA Standard 204-05
- Frames made of galvanized steel.
- Ball bearings are pre-lubricated, sealed, and self-centering. Mounted on bearing bracket as well as shock-proof washer
- Shaft made of 40 Cr carbon steel bars and coated to prevent corrosion.
- Fans are AMCA Certified for Air Performance and Sound.
- The fan section is easily accessible through a wide, hinged access door
- Optional Items:
  - Bulkhead lamp with external switch
  - Door drive screen or drive guard
  - Terminal Box
  - Variable Frequency Drive
  - 2 Fans each 50% + 50%
  - Standby Fans

Fig 24: Forward Curved Fan

Fig 25: Backward Curved Fan

Fan Motor/Drive

- Three-phase, asychronous IE3 efficiency motor
- Totally enclosed, fan–cooled (method of cooling IC 411)
- Rating and Performance as per IEC 60034-1
- IP55 Protection with Class-F insulation
- Designed to work at continuous running duty (S1) at rated average aluminum profiles with Spring or Rubber anti-vibration mount.
- Fan Motor assembly rest on strong base made of closed double aluminium profiles with Spring or Rubber anti vibration mount.
- Transmission occurs through trapezoidal belts and conical bush pulleys, sliding tensioning device provided for automatic belt tightening.

Fig 26: Fan Motor Assembly

Plenum Fans

- Impeller made of steel sheet with Backward curved / Aerofoil blades with painted Finish.
- Impellers are statically and dynamically balanced to a grade of G=2.5 in accordance with DIN ISO 1940-1.
- Impellers are secured to the shaft through a steel or aluminium hub.
- The frames shall be made of galvanized steel material.
- The Fan Motor offered confirm to the below:
  - Three-phase, asynchronous IE3 efficiency motor
  - Totally enclosed, fan–cooled (method of cooling IC 411)
  - Rating and Performance as per IEC 60034-1
  - IP55 Protection with Class-F insulation
  - Designed to work at continuous running duty (S1) at rated voltage and frequency.
- Fan motor assembly should be mounted on a sturdy base with suitable high efficiency spring isolators so that no vibrations are transmitted to the AHU casing.
- The fan section shall be easily accessible through a wide, hinged access door.
- Optional Items:
  - Bulkhead lamp with external switch.
  - Door drive screen or drive guard.
  - Terminal Box
  - Variable Frequency Drive
  - 2 Fans Each 50% + 50%
  - Standby Fans

Fig 26: Plug Fan Assembly

EC Fans

- Direct-drive single inlet centrifugal fans with backwards-curved high-performance centrifugal impellers with radial diffusers, mounted on EC external rotor motor with integrated control electronics.

- Impeller made of aluminum, with 5 backwards-curved, continuously welded, hollow-profile blades; impeller sizes 250 and 280 made of plastic; flow-optimized inlet ring made of galvanized sheet steel with pressure tap.

- Motorized impeller statically and dynamically balanced on two planes to balancing grade G 6.3 (motor size 200 to balancing grade G 4.0) in accordance with DIN ISO 21940.

- EC external rotor motors achieve or exceed efficiency class IE5, magnets with no rare earth elements, maintenance-free ball bearings with long-term lubrication, nominal service life of at least 40.000 hours of operation.

- Efficiency level of integrated EC motor equivalent to IE5 according to IEC/TS 60034-30-2 (Rotating electrical machines-Part 30-2: Efficiency classes of variable speed AC motors.

- Terminal box made of aluminum/plastic with easily accessible connection area with spring-loaded terminals, environment-resistant cable glands, or with external cable (sizes 250 to 280).

- Integrated protective devices:
  - Alarm relay with zero-potential change-over contacts (250 V AC/2 A, cos w = 1)
  - Locked rotor protection
  - Phase failure detection
  - Soft start of motors
  - Mains under-voltage detection
  - Thermal overload protection for electronics and motor
  - Short circuit protection

- For Fan wall arrangement, EC fans are wired to an external junction box with disconnect switch, fuse, and MODBUS / 0-10 V connection.

- Airflow or Pressure LCD controller factory fitted and wired.

Fig 27: EC Fan

Fig 28: Airflow/Pressure LCD Controller

Rotary Heat Recovery

Sorption & Condensation Energy Recovery Wheel

- The heat recovery wheels are Eurovent or AHRI certified.
- Sorption: The rotor media is coated with a combination of a corrosion-prohibiting and non-migrating adsorbent Molecular Sieve 3A desiccant to recover sensible heat and latent heat to a very high degree.
- Condensation: The Rotor shall be constructed of alternate layers of corrugated and flat aluminum foil.
- Maximum operating temperature of 70°C.
- Rotors rotate at 20 to 25 RPM.
- Pressure drop across the heat recovery wheels not to exceed 2.5 mm for every 0.5 m/s face velocity.
- The Rotor have smooth air channels to ensure laminar airflow.
- Brush seals are provided for the radial seal and the seal between the air flows along the middle beams.
- Purge sector is provided to limit cross contamination at appropriate design conditions.
- The drive motor installed at a selectable position in the casing.
- Optional Items:
  - Speed controller - VFD
  - Special Casing Coating

Fig 29: Heat Wheel

Cross Flow Heat Recovery

- The cross-flow plate heat exchangers consisting of exchanger package and casing. The exchanger packet consists of aluminum plates with pressed-in spacer; the thickness of the plate 125 µm. The aluminium plates have high rigidity through the special arrangement of the vertical and horizontal ribs.
- The profiles arranged in such a way that the condensation can drain in every direction.
- The connection of the plates made by a fold which gives several fold materials thicknesses at air entry and exit, also gives good rigidity to the exchanger package.
- Casing and side walls made up of Aluzinc Sheet Steel and the exchangers is silicone-free.
- The corners of the exchanger package sealed into especially rigid aluminium extrusions in the casing with sealing compound. The side walls of Aluzinc sheet steel are bolted tightly to these extrusions
- At the corners, the sections are flattened by 45° which facilitates installation of the exchanger and reduces the diagonal dimension.
- The plate heat exchanger is EUROVENT certified.

Fig 30: Cross Flow/Counter Flow Heat Recovery

Horseshoe Heat Pipe

- The heat pipe consists of a precool and reheat fin block.

  Fins are continuous plate type to maximize the external surface area.
- Tubes are of refrigeration standard seamless copper C106 for heat exchanger use.
- The casing shall incorporate tube plates, side plates and intermediate stiffening plates as required.
- The working fluid of refrigerant type classified as ASHRAE safety group A1. The heat pipe circuits are factory charged and hermetically sealed with the calculated weight of refrigerant.
- Optional Item: Anti-Corrosive Coating

Fig 31: Horseshoe Heat Pipe

Electric Heaters

- Heating Element made of 80/20 nickel chrome resistance wire, centered in stainless steel grade 304L sheath metal tubes by compressed magnesium oxide.
- Stainless Steel Helical fins are tightly wound around tubular heating elements.
- Terminal are welded with nickeled steel screw with nut and washer(M6) for easy termination.
- Safety devices
  - Automatic reset thermal cut out to ensure safe operating temperature of the heater, Cut out at 60 °c.
  - Manual reset thermal cut out to ensure safe operating temperature of the heater, cut out at 70 °c and must be manually reset once it has tripped.
  - Airflow switch (DPS, Diff Pressure Switch) to ensure airflow through the heater for it to be enabled or de-energized when the fan is detected not running.
  - Safety devices are unit mounted, wired in series, and terminated at an external junction box located on the electric heater section. String of safety devices should be interlocked with the Field supplied and installed Heater Starter System before Energizing the Heater.
- Optional Item: Thyristor Control

Fig 32: Electric Heater

Plug & Play Controls - Factory Mounted

- Single Point of contact for the complete equipment.
- Internal fitting of all Sensors & Pressure measurements devices.
- Internal Electrical wiring for all components
- Plug & Play design with low voltage fast connectors in between AHU sections.
- Fully programmed and Tested prior to AHU shipment.
- Significantly reduce the installation time at site
- Remote monitoring option helps in:
  - Modify the control logic based on actual unit operation to achieve best IEQ at the lowest energy consumption.
  - Predictive maintenance

Fig 33: Control Panel

Fig 34: Controller

Other Options

Fig 35: Evaporative Pad Type Humidifier

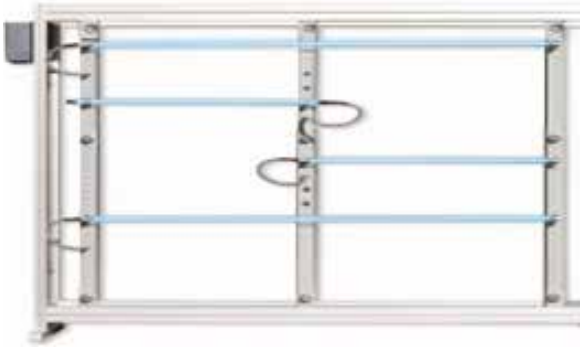

Fig 36: UV Lamp

Fig 37: Steam Humidifier

Fig 38: Sound Attenuator

Special Projects

AHU For Rental Application

Spark Proof Chemical Filtration Unit

Eurovent Certified Characteristics

RESULT ENERGY TERMIC⁰S2&F2

EUROVENT CLASSIFICATION ACCORDING TO EN 1886 STANDARD

D1	Casing strength class	D1	D2	D3		
	Max. relative deflection mm x m^{-1}	4.00	10.00	Exceeding10		
L1	Casing air leakage class at -400 Pa	L1	L2	L3		
	Max. leakage rate (f_{400}) l x s^{-1} x m^{-2}	0.15	0.44	1.32		
L1	Casing air leakage lass at +700 Pa	L1	L2	L3		
	Max. leakage rate (f_{700}) l x s^{-1} x m^{-2}	0.22	0.63	1.90		
ePM$_1$ 80% (F9)	Filter bypass leakage class	ePM$_1$ 80% (F9)	ePM$_1$ 70% (F8)	ePM$_1$ 50% (F7)	ePM$_{2.5}$ 50% (M6)	ISO Coarse
	Max. filter bypass leakage rate k in % of the volume flow rate	0.50	1	2	4	6
T2	Thermal transmittance	T1	T2	T3	T4	T5
	(U) W x m^{-2} x K^{-1}	U <= 0.5	0.5 < U <= 1	1 < U <= 1.4	1.4 < U <= 2	No requirements
TB2	Thermal bridging factor	TB1	TB2	TB3	TB4	TB5
	(kb)	0.75 < K_b <= 1	0.6 < K_b <= 0.75	0.45 < K_b <= 0.6	0.3 < K_b <= 0.45	No requirements

Daikin Applied Europe S.p.A. participates in the Eurovent Certified Performance programme for Air Handling Units. Check ongoing validity of certificate: www.eurovent-certification.com or www.certiflash.co.

Product Certificates

Eurovent Certificate

Eurovent Certita CERTIFICATION

CERTIFICATE N° 14.05.003

EUROVENT CERTIFIED PERFORMANCE

Air Handling Unit / Centrales de traitement d'air

Range Name / Nom de Gamme :
D-AHU

Granted on May 13, 2014 - *Date 1ère admission 13 mai 2014*

This document is valid at the date of issue - Check the current validity on:
Document valable à la date d'émission - Vérifier la validité en cours sur :
www.eurovent-certification.com

Participant/Titulaire

DAIKIN Applied Europe S.p.A
S.S Nettunense,km 12+300
00040 Cecchina, Italy

This product performance certificate is issued by Eurovent Certita Certification according to the certification rules:

ECP AHU - « Air Handling Unit » in force at established date.

Pursuant to the decision notified by Eurovent Certita Certification, the right to use the mark ECP shall be granted to the beneficiary company for the above Range in the conditions defined by the certification program mentioned.

Unless withdrawn or suspended, this certificate remains valid as long as the requirements for the certification program framework are met. The validity of the certificate is to be verified on www.eurovent-certification.com

THIS CERTIFICATE HAS BEEN ISSUED ON 24/06/2024
THIS CERTIFICATE IS VALID UNTIL 30/06/2025

Ce certificat de performance produit est délivré par Eurovent Certita Certification dans les conditions fixées par le référentiel :

ECP AHU - « Centrales de traitement d'air » en vigueur à date d'édition.

En vertu de la décision notifiée par Eurovent Certita Certification, le droit d'usage de la marque ECP, est accordé à la société qui en est bénéficiaire pour la gamme visée ci-dessus, dans les conditions définies par le programme de certification mentionné.

Sauf retrait ou suspension, ce certificat demeure valide tant que les conditions du référentiel du programme de certification sont respectées. La validité du certificat est à vérifier sur le site Internet www.eurovent-certification.com

CE CERTIFICAT A ÉTÉ EMIS LE 24/06/2024
CE CERTIFICAT EST VALIDE JUSQU'AU 30/06/2025

Paris, 24 juin 2024

MANAGING BOARD MEMBER / MEMBRE DIRECTOIRE

cofrac
CERTIFICATION DE PRODUITS ET SERVICES

1/2

EUROVENT CERTITA CERTIFICATION SAS au capital de 100 000 € - 34 rue Laffite 75009 Paris - FRANCE
Tel. : 33 (0)1 75 44 71 71 - 513 133 637 RCS Paris - TVA FR 59513133637

Eurovent Certita CERTIFICATION

CERTIFICATE N° 14.05.003

EUROVENT CERTIFIED PERFORMANCE

Appendix / Annexe

Granted on May 13, 2014 - *Date 1ère admission 13 mai 2014*

This document is valid at the date of issue - Check the current validity on:
Document valable à la date d'émission - Vérifier la validité en cours sur :
www.eurovent-certification.com

List of certified products and characteristics is displayed on:
La liste des références et caractéristiques certifiées est disponible sur le site :
www.eurovent-certification.com

This product performance certificate is valid for the following trade names:
Ce certificat de performance produit est valide pour les marques commerciales suivantes:
Trade Name / Marque Commerciale

DAIKIN

This product performance certificate is valid for the following manufacturing places:
Ce certificat de performance produit est valide pour les sites de production suivants:
Manufacturing Place / Site de Production

Riyadh, Saudi Arabia
Caleppio di Settala (Milan), Italy
Cramlington (Newcastle), United Kingdom
Chipping Norton, Australia
Dubai, United Arab Emirates

This product performance certificate is valid for the following software:
Ce certificat de performance produit est valide pour les logiciels de sélection suivants:
Software / Logiciel de sélection

ASTRAWEB 10.1.19.1

2/2

EUROVENT CERTITA CERTIFICATION SAS au capital de 100 000 € - 34 rue Laffite 75009 Paris - FRANCE
Tel. : 33 (0)1 75 44 71 71 - 513 133 637 RCS Paris - TVA FR 59513133637

Hygienic Certificate

TÜVNORD

Certificate

KKL/1015/23

Report no. / Validity remark: TR-KKL-2024-028 / 05.2024 - 12.2024

Confirmation of Product Characteristics

In accordance with the certification scheme TNS-KKL of the test laboratory for refrigeration, air conditioning & ventilation of TÜV NORD Systems, this certificate applies to

Air Handling Unit in hygienic version (H-AHU)

placed on the market under the name or trade mark

DAIKIN "D-AHU" (SA)

by

Daikin Air Conditioning Saudi Arabia LLC
Al-Morjan Street, Cross #37, 6587 Sudair
Industrial & Business City, SAUDI ARABIA

This certificate confirms that the requirements placed on the product are met.
The following performance data were verified as part of the type approval test:

Hygienic characteristics set through

- DIN 1946-4:2018 section 6.5
- VDI 6022-1:2018 section 6.3

This certificate remains valid as long as neither the provisions in the underlying technical specifications, the product nor the manufacturer's manufacturing conditions change significantly, but for a maximum of 3 years, unless the certificate is suspended or withdrawn by the product certification body. Annual surveillance in accordance with the certification scheme is a prerequisite.

Essen, 23 May 2024

TÜVNORD Digitally signed by Steimle Monika
Date: 2024.05.23 11:58:08 +02'00'

Test Laboratory for Refrigeration, Air Conditioning & Ventilation

TÜV NORD Systems GmbH & Co. KG
Große Bahnstraße 31, 22525 Hamburg, Germany
tuev-nord.de | pruefstellekkl@tuev-nord.de

TÜV®

TÜVNORDGROUP

Certificate KKL EN | Rev. 0 | 05.24

Factory Certificates

ISO 9001/ISO 14001

Bureau Veritas Certification

DAIKIN AIR CONDITIONING SAUDI ARABIA LLC.

AL-MORJAN STREET, CROSS # 37, SUDAIR INDUSTRIAL & BUSINESS CITY, , ., SAUDI ARABIA

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification

MANUFACTURING, SUPPLY AND TECHNICAL SUPPORT OF AIR HANDLING UNITS

Original Cycle Start Date:	01-09-2022
Expiry date of previous cycle:	NA
Certification / Recertification Audit date:	22-08-2022
Certification / Recertification cycle start date:	01-09-2022
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	31-08-2025

Certificate No.: SA002942 Rev: 1 Issue date: 01-09-2022

Bureau Veritas Certification

DAIKIN AIR CONDITIONING SAUDI ARABIA LLC.

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ISO 14001:2015

Scope of certification

MANUFACTURING, SUPPLY AND TECHNICAL SUPPORT OF AIR HANDLING UNITS

Original Cycle Start Date:	01-09-2022
Expiry date of previous cycle:	NA
Certification / Recertification Audit date:	22-08-2022
Certification / Recertification cycle start date:	01-09-2022
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	31-08-2025

Certificate No.: SA002943 Rev: 1 Issue date: 01-09-2022

ISO 45001

Bureau Veritas Certification

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ISO 45001:2018

Scope of certification

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Expiry date of previous cycle:	NA
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Certification / Recertification cycle start date:	01-09-2022
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	31-08-2025

Certificate No.: SA002944 Rev: 1 Issue date: 01-09-2022

www.daikinmea.com

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