DAIKIN

INDOOR AIR QUALITY

Air Filtration Unit

DAFU 1000

H14
HEPA FILTER

HIGH EFFICIENCY
EC FAN
with Variable
Speed Control

UV LAMP

CARBON
FILTER

MERV 8
FILTER

Proudly made in the UAE

The importance of good indoor air quality

According to the World Health Organization (WHO) **"Air pollution from both outdoor and indoor sources represents the single largest environmental risk to health globally",** and causes 7 million deaths a year, worldwide.

On average, people spend 90% of their lives indoors (and some, such as the elderly, even more). This has caused the level of indoor air pollutants to increase 2-5 times higher than outdoor levels.

Indoor air pollution can lead to serious short and long-term health problems. There has also been growing evidence that air pollution impacts mental health and may be a factor in conditions such depression and bipolar disorder. It may also have a detrimental effect on children's learning ability, patient recovery and workforce productivity.

For building owners, poor indoor air quality (and poor indoor environments in general) can hit the bottom line: demands from leaseholders and tenants can result in having to carry out costly remedial works to both the building fabric and M&E systems (from lighting to climate control). This can lead to higher running costs and potentially affect market and rental values.

Why choose Daikin?

As a global leader in the HVAC-R industry, we rely on more than 90 years of experience and expertise to deliver the highest quality solutions and services.

The Daikin air filtration unit upholds our promise to provide cleaner and healthier indoor climates in homes, offices and commercial spaces around the world. Because our care for the planet is absolute, our air purifiers are designed with the latest technology to consume less energy and reduce their environmental impact.

Our commitment to quality also means providing the best service experience for our customers. From on-site support and installations to troubleshooting and maintenance, our experts are here to help you achieve the perfect climate.

Air Filtration Unit

Daikin's air filtration unit is equipped with 3-stage filtration including 99.99% efficient HEPA filters. It is a portable, with nominal 1000 CFM, air filtration unit designed to serve small to medium-sized facilities like health care facilities to quickly and inexpensively convert standard patient rooms to negative pressure isolation rooms. It also helps any conditioned space as a recirculating device that provides equivalent outdoor air changes (ACH) to eliminate air borne infections.

Product Highlights

Air Filtration unit can be operated in any of the below modes:
1. 100 % Exhaust
2. 100% Recirculating

This powerful unit is equipped with an EC Fan with variable speed control and can deliver airflow from 300 CFM to 1000 CFM. The EC Fan ensures lower sound levels and high efficiency.

The Daikin Air Filtration Unit is designed to comply with filtration requirements as outlined in ASHRAE Standard 170 "Ventilation of Health Care Facilities."

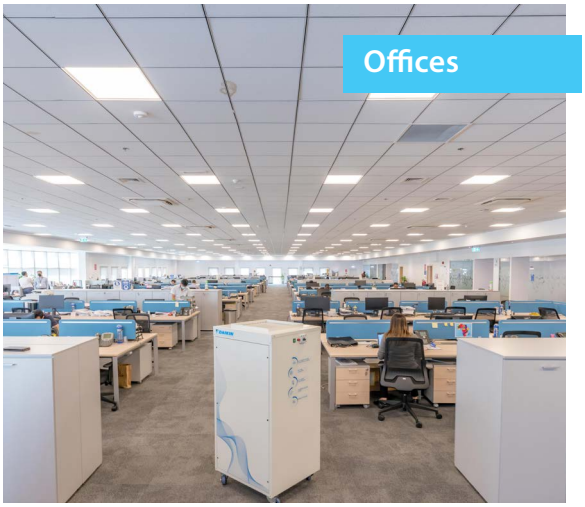
- Compact Vertical Design with Footprint 0.35 m2
- Nominal Airflow 1000 CFM, able to provide 12 ACH in Rooms up to 5000 Cubic Feet
- Casing 1.0 mm thick prepainted Galvanized steel in RAL 9002 smooth finish
- Other RAL color options available for the casing
- Casing insulated with Acoustic insulation
- 3 Stages Filtration with UV lamp
- HEPA filter auto scan tested as per EN 1822
- Indication Lights for unit running and HEPA Filter dirty warning

Dimensions:
1315 mm (H) x 622 mm (W) x 562 mm (D)

Suitable for power supply
240-220V/1Ph/60-50 HZ

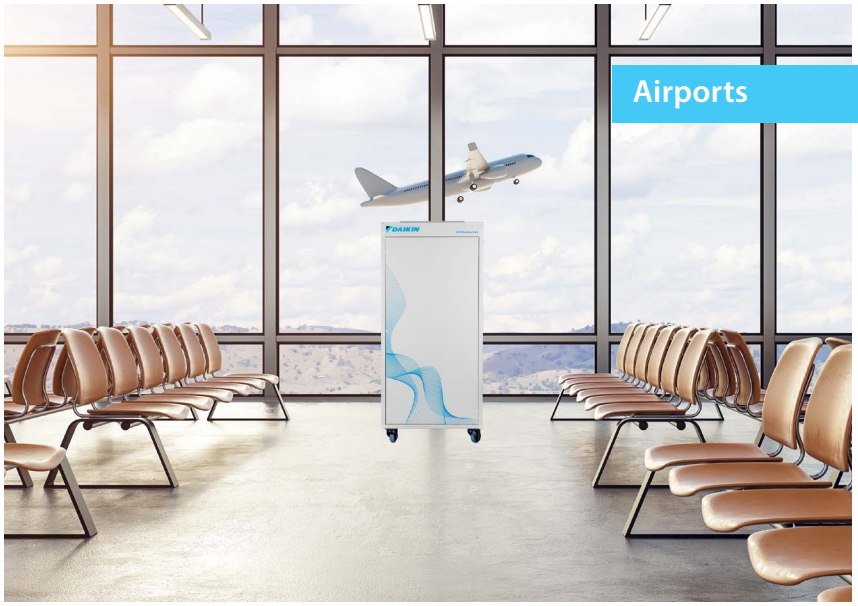
Applications

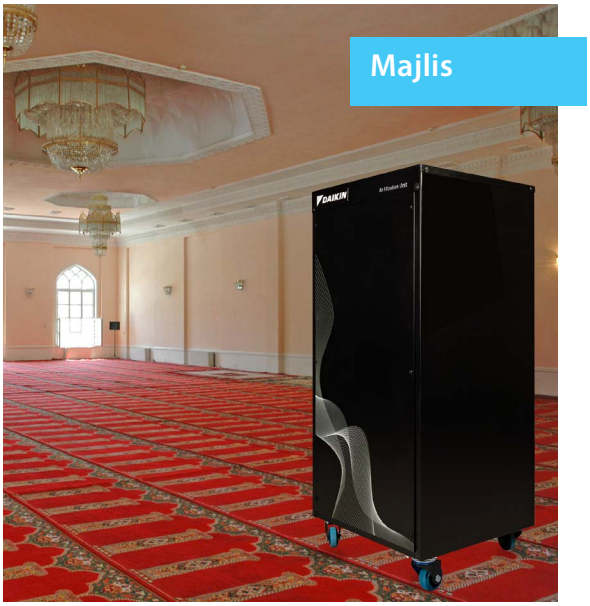
The air filtration unit purifies and cleans the air of the spaces that matter most.




Hotel Lobby


Sanitizing
Hotel Rooms


Airports

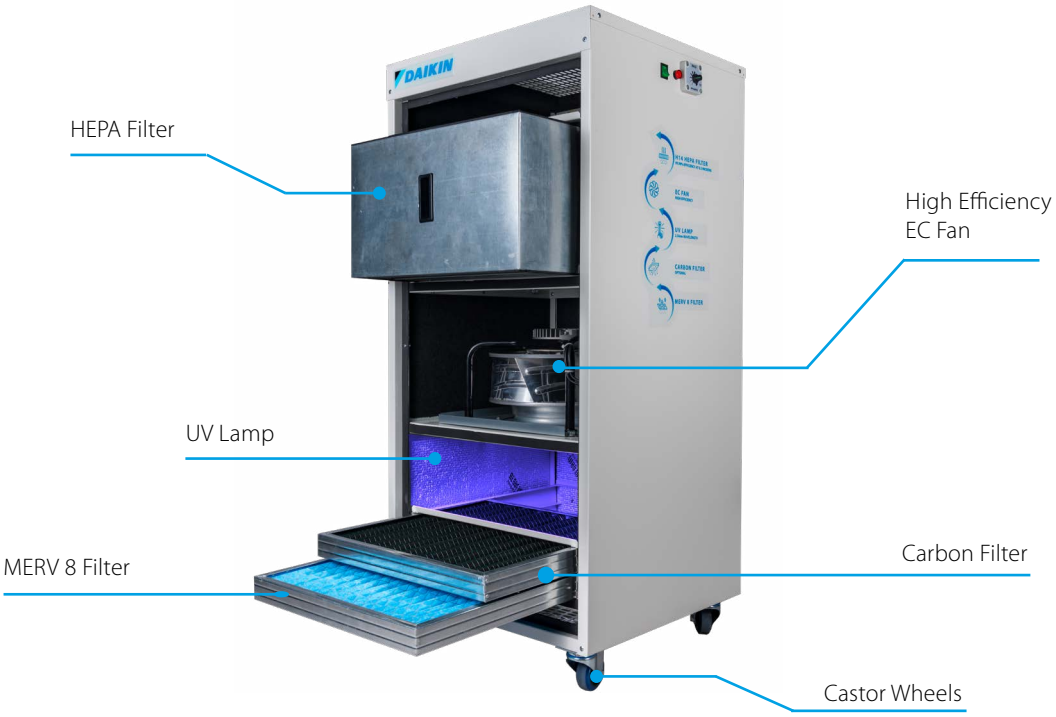

Majlis


Commercial
Centers


Fitness
Centers

Unit Components

Unit Diagram



MEGApleat MERV 8 Filter

MERV 8 classification is documented with test results from an independent, third-party test laboratory.
Highest dust holding capacity (DHC) - longest life of the filter
Highest breach strength meaning strongest construction
Heavy-duty, galvanized expanded metal support grid
Lowest lifecycle pressure drops meaning reduced energy consumption
UL-classified

AmAir®/C Carbon Filter (Optional)

Economical solution to many gaseous contaminant problems including odors.
Pleated Panel filters made with Activated carbon media
Minimum Efficiency Reporting Value MERV 7
UL-classified

UV Lamp

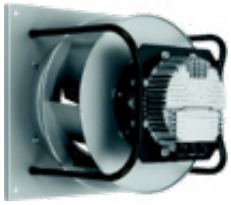
High Output UV lamp (254 nm) to Inactivate Virus, Bacteria and Fungi

AstroCel III HEPA filters

H14 Hepa Filters with 99.99% Efficiency at 0.3 microns
Large media area and low resistance to reduce operating costs
Chemical-resistant anodized aluminum frame provides superior strength
UL-classified

High Efficiency EC Fan

High-efficiency backward curved impeller made of aluminium blades
High Efficiency EC Motor with IP 44 Rating
Low noise emissions
Long service life

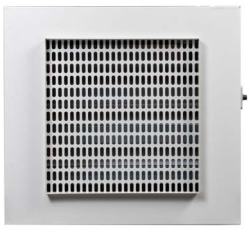


Transition Plate (Optional)

To easily connect the unit discharge to flexible ducts in 100% exhaust application (negative pressure rooms)
Suitable for 10" diameter flexible ducts

Safety Guards

Provided on unit inlet and discharge in compliance with OSHA regulations (Occupational Safety and Health Administration)



On/Off Switch / Dirty Filter / Speed Control

› On/Off Switch with green light to indicate that the unit is on and working
› Red light to indicate HEPA filter is dirty and needs replacement
› Manual speed controller to provide infinitely variable speed control between 0% and 100%

Castor Wheels

Portable and lockable system with heavy-duty casters for easy movement from room to room

Technical Specifications

Model			DAFU 1000
Casing			Prepainted Steel RAL 9002
Capacity - Nominal Air Flow		CFM	1000
Fan			EC Fan
Speed Control			Variable
Air Flow Range	Turbo	CFM	1000
	Boost		650
	Quiet		480
Motor Power		kW	0.5
Sound Pressure	Turbo/Boost/Quiet	dB(A)	54/50/43
Air Filter Type			MERV8 Filter
			Carbon Filter (Optional)
			H14 HEPA Filter
UV Lamp			254nm
Unit Dimension		HxWxD (mm)	1315 x 622 x 562
Unit Weight		kg	90

Notes:
Sound Power levels measured in accordance to BS EN ISO 3747:2010
Sound pressure calculated (parallelepiped measurement surface) at a distance of 1.5m

Quick Selection Guide

Recommended Air Change Rate based on application

Step 1: Select the air change rate based on application.

Application	Recommended ACR
Classroom	2-4
Offices	2-8
Restaurant	4-8
Movie Theater	5-8
Gym	4-6
Hospital	5-8
Laboratory	Up to 15

Step 2: Select the number of units required based on air change rate and cleanable room area.

Air Change Rate	Air Changes Every. .	Nominal Cleanable Room Volume	Nominal Cleanable Room Area
	mins	m^3	m^2
2	30	850	283
4	15	425	142
6	10	283	94
8	7.5	212	71
10	6	170	57
12	5	142	47

Notes:
1. Based on nominal airflow 1000 CFM
2. Room height considered 3 meters

Dimensional Drawing

Guide Specifications
DAFU 100

Unit Construction

Vertical design with unit casing made of 1.0 mm thick prepainted galvanized steel in smooth white finish (RAL 9002).

Unit should be insulated with 25mm thick acoustic insulation. Insulation should have excellent resistance to bacteria and fungi with low VOC levels.

Safety guards should be provided on the unit Inlet and outlet complying with OSHA regulations. Unit should be portable with heavy-duty casters for easy movement.

Filtration Stages

Unit should be equipped with 3-stage filtration along with UV lamps.

Prefilter

Prefilters should be available with minimum MERV 8 efficiency classification. Filter efficiency should be documented with test results from an independent, third-party test laboratory.
Prefilters should have the highest dust-holding capacity (DHC) to ensure longer life for the filter. Filters should be UL-classified.

Carbon Filter

Carbon filters should be pleated panel type made of activated carbon media and effective against odors. Filters should be UL-classified.

HEPA Filter

HEPA filters should be H14 with 99.99% efficiency. Filter media should have a chemical-resistant anodized aluminum frame. Filters should be UL-classified. HEPA Filter should be mounted as the last component of the unit upstream of the fan.

UV Lamp

High efficiency and high output UV lamp (254 nm) should be provided to inactivate viruses, bacteria and fungi.

Fan

Fan should be EC fans with high-efficiency backward curved impeller made of aluminium blades. Motors should have minimum IP44 protection.

Unit Control and Operation

Below should be provided as a minimum for the unit control and operation:
• On/Off Switch with green light to indicate that the unit is on and working
• Red light to indicate HEPA filter is dirty and needs replacement.
• Manual speed controller to provide infinitely variable speed control between 0% and 100%

Transition Plate [Accessory]

This is desigend for 100% exhaust application. Transition plate should be provided to easily connect the unit discharge to 10" diameter flexible ducts.

About the AHU Factory

Daikin's AHU factory based in Dubai, UAE is a well-equipped facility built to design, manufacture, and assemble a variety of products and solutions in Daikin's extensive range.

Factory Certifications

BUREAU VERITAS Certification

DAIKIN MIDDLE EAST & AFRICA FZE
P. O. BOX 18674, JEBEL ALI FREE ZONE, DUBAI,
UNITED ARAB EMIRATES.

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 FOR AIR HANDLING UNITS.

Original cycle start date: **5th AUGUST 2015**
Expiry date of previous cycle: **4th AUGUST 2018**
Recertification Audit date: **16th JULY 2018**
Recertification cycle start date: **2nd AUGUST 2018**
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **1st AUGUST 2021**
Certificate No. **IND18.5237U/Q** Version No. **1**, Revision date: **02/08/2018**

Signed on behalf of BVCH SAS UK Branch

UKAS MANAGEMENT SYSTEMS 0008

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: Bureau Veritas Certification, 2nd Floor, Block C, Al Hudaiba Awards Building, 2nd December Street, Dubai, UAE.
Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: 00971 4 3074400

BUREAU VERITAS Certification

DAIKIN MIDDLE EAST & AFRICA FZE
P. O. BOX 18674, JEBEL ALI FREE ZONE, DUBAI,
UNITED ARAB EMIRATES.

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 14001:2015

Scope of Certification

MANUFACTURING, SUPPLY AND TECHNICAL SUPPORT FOR AIR HANDLING UNITS.

Original cycle start date: **2nd AUGUST 2018**
Expiry date of previous cycle: **NA**
Recertification Audit date: **16th JULY 2018**
Recertification cycle start date: **2nd AUGUST 2018**
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **1st AUGUST 2021**
Certificate No. **IND18.5237U/E** Version No. **1**, Revision date: **02/08/2018**

Signed on behalf of BVCH SAS UK Branch

UKAS MANAGEMENT SYSTEMS 0008

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: Bureau Veritas Certification, 2nd Floor, Block C, Al Hudaiba Awards Building, 2nd December Street, Dubai, UAE.
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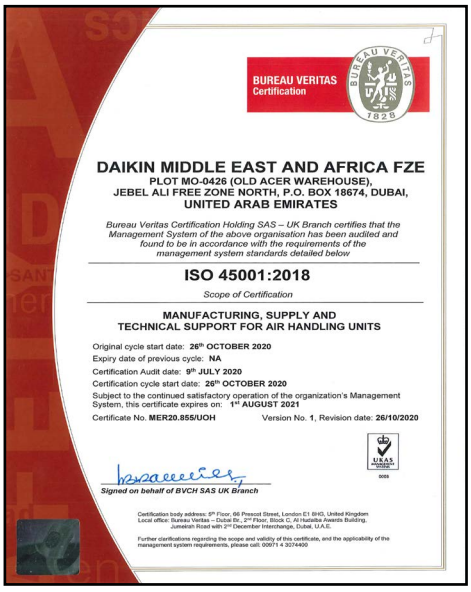

BUREAU VERITAS Certification

DAIKIN MIDDLE EAST AND AFRICA FZE
PLOT MO-0426 (OLD ACER WAREHOUSE),
JEBEL ALI FREE ZONE NORTH, P.O. BOX 18674, DUBAI,
UNITED ARAB EMIRATES

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 45001:2018

Scope of Certification

MANUFACTURING, SUPPLY AND TECHNICAL SUPPORT FOR AIR HANDLING UNITS

Original cycle start date: **26th OCTOBER 2020**
Expiry date of previous cycle: **NA**
Certification Audit date: **9th JULY 2020**
Certification cycle start date: **26th OCTOBER 2020**
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **1st AUGUST 2021**
Certificate No. **MER20.855/UOH** Version No. **1**, Revision date: **26/10/2020**

Signed on behalf of BVCH SAS UK Branch

UKAS MANAGEMENT SYSTEMS 0008

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: Bureau Veritas – Dubai Br., 2nd Floor, Block C, Al Hudaiba Awards Building, Jumeirah Road with 2nd December Interchange, Dubai, U.A.E.
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www.daikinmea.com

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