

# Perfecting the Air



# Perfecting the Air

- Ask a gualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have enquiries, please contact your local importer, distributor and/or retailer.

**Cautions on product corrosion** 

- 1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
- 2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.



### Jam Beroperasi:

Senin - Jumat: 07:00 - 19:00 WIB Sabtu - Minggu & Libur Nasional: 07:00 - 17:00 WIB

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Streamer Duct Chamber | Cassette Streamer | High Performance Prefilter Outdoor-Air Processing Unit | Heat Reclaim Ventilator

PT DAIKIN AIRCONDITIONING INDONESIA

**DEALER RESMI** 

# **DIDIEQ2401**

# Indoor **Environment**



The world contains an infinite number of spaces.

Daikin believes that the air in each of them should be ideally suited to the environment they support. Thus, we make it possible to manage the air to control its temperature, humidity, flow and cleanliness. Exciting new research promises the ability to modulate sensory elements, such as light and smell. We will continue to identify opportunities and seek

solutions as we strive to the make world's spaces happier and more comfortable. At Daikin, we discover something new every day. Because the Solution is in the Air.



# Filter recommendation for HVAC systems under COVID-19 situation by ASHRAE ETF \*1

# WHAT IS THE SIZE OF THE SARS-COV-2 VIRUS, AND CAN IT BE CAPTURED BY VENTILATION FILTERS?

A: Research has shown that the particle size of the SARS-CoV-2 virus is around 0.1 µm (micrometer). However, the virus does not travel through the air by itself. Since it is human generated, the virus is trapped in respiratory droplets and droplet nuclei (dried respiratory droplets) that are predominantly 1 µm in size and larger.

**%1 ASHRAE ETF (n.d.) FILTRATION AND DISINFECTION FAQ. Retrieved March 9,** 2022. from https://www.ashrae.org/technical-resourc es/filtration-and-disinfection-faq

> ASHRAE currently recommends using a minimum MERV 13 filter, which is at least 85% efficient at capturing particles in 1 µm to 3 µm size range. A MERV 14 filter is at least 90% efficient at capturing those same particles. Thus, the recommended filters are significantly more efficient at capturing the particles of concern that a typical MERV 8 filter which is only around 20% efficient in the 1 µm to 3 µm size range. For filters with MERV ratings higher than 14 would capture an even higher percentage of the particles of concern. (ASHRAE ETF, n.d.)

### ASHRAE is an abbreviation for "American Society of Heating, Refrigerating and Air-Conditioning Engineers".

Standard 52.2. Minimum Efficiency Reporting Value	Composite Average Particle Size Efficiency. % in Size Range, µm			
	Range 1 (0.3-1.0)	Range 2 (1.0-3.0)	Range3 (3.0-10.0)	
14	≥75%	≥90%	≥95%	

# **Target Application**

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### H

Facility	Common	Measures for Each Fac
Facility	Recommendation	For air-conditioned facilities with m
Residential Landed properties Apartment/Condominium		<ul> <li>When ventilating</li> <li>The recommended temperature setting for air of the recommended relative humidity in the roor</li> <li>Operate electric fans to enhance thermal comfinate the openings small not to cause excession when air conditioning is in operate.</li> </ul>
Light Commercial Restaurant/Café Spa/Hair Salon Pharmacy	<ul> <li>Increase ventilation rate (10 L/s per person)</li> <li>Reduce max room occupancy</li> </ul>	When ventilating • The recommended temperature setting for air of • The recommended relative humidity in the roor • Run ventilation fan continuously to keep the air • Ensure maintenance and inspection. • Filter inspection and replacement.
Commercial / public Area Office Commercial Building Showroom School/University Classroom	<ul> <li>Open window and door frequently</li> <li>Use portable air cleaner with appropriate filters</li> </ul>	<ul> <li>When ventilating</li> <li>Ensure the system are fully functioning.</li> <li>Minimize the recirculation of dirty air; Increase air filter which capable of catching dir</li> <li>Adjust airflow operation and reconfigure equip</li> </ul>
Healthcare Hospital Clinic Quarantine Center		<ul> <li>When ventilating</li> <li>Ensure the system are fully functioning.</li> <li>Minimize the recirculation of dirty air; Increase air filter which capable of catching dir</li> <li>Adjust airflow operation and reconfigure equipation</li> <li>Set recirculation air dampers to a minimum according to the system of the system are fully functioning.</li> </ul>
Solution from Daikin		Solution fro

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# **Residential**



Heat Reclaim Ventilator (VAM Series), Streamer Duct Chamber (Dust Collection Filter (MERV 14) and Streamer), Streamer Wall Mount Indoor Unit, Streamer Air Purifier Unit



Outdoor Air Processing Unit, Heat Reclaim Ventilator (VAM Series), Streamer Duct Chamber (Dust Collection Filter (MERV 14) and Streamer), Streamer Cassette Indoor Unit, Streamer Air Purifier Unit



# **Commercial / Public Area**







# ility Situation

echanical ventilation

conditioning is 23-26°C. m is 40-70%. fort. ve infiltration of outdoor air

conditioning is 23-26°C. m is 40-70%. from stagnating.

rt, in air conditioning system. ment.

rt, in air conditioning system. ment. cording to system capabilities.

# m Daikin



# Streamer Duct Chamber

# Just leave it to Daikin "Streamer Duct Chamber"



CAUTION

# **Operating Conditions**

To ensure the correct usage of the unit, operate it within the operating conditions specified in the table below.

Airflow range (CMH)
80-600
500-1400
1200-5100
-10° to 50°C

### Do not install the unit in places such as the following :

1. Place subjected to high temperature or direct flame. Overheat or fire may result. 2. Where there is mist of oil, oil spray, or vapor, for example, kitchen, barber or salon. Fire may result. 3. Where toxic gas from acid, alkaline, organic solvents or coating, or corrosive gas is produced, for example, a machinery or chemical plant. Gas poisoning or fire may result. 4. Place subject to high humidity. Electric shock or electrical leakage may result. 5. Where there is machinery that emits electromagnetic waves. Electromagnetic waves may disturb the control system and cause malfunction of the unit. 6. Where flammable gases may leak, where carbon fiber or ignitable dust is suspended in the air or where volatile flammables, such as thinner or gasoline, are handled. If the gas should leak and remain around the unit, it may cause ignition. 7. Places with high salt contents such as coastal area. 8. Places with sulfur gas contents such as hot springs. 9. Insides cars or ships. 10. Places with high smoke contents such as smoking room.

There are many types of Combination

# **Streamer Duct Chamber Mechanism**





Madal	Power Voltage Range	Power Supply			Voltage range		oltage range
Model	50 Hz	MCA	MFA	Model	Field Supplied	Wire	Size
BDEZ500A60VE	Power Supply			BDEZ500A60VE			
BDEZ500A140VE	Max. 264V - Min. 198V			BDEZ500A140VE			1.0mm² (Table 11 IEC 60335 - 1), wire must comply with local codes
BDEZ500A510VE		0.05		BDEZ500A510VE			

Symbol:

MCA: Min. Circuit Amps (A) MFA: Max. Fuse Amps (A) NOTE: For details, refer to ELECTRICAL DATA NOTE: For details, please refer to ELECTRICAL DATA in Installation Manual.



Heat Reclaim Ventilator (VAM Series)

**Connectable** 

**Air Conditioning** 

# Also supports installation to existing equipment.

Fan Coil Unit

**Duct Type Indoor Unit** 

Flexibility







### For more installation combination, please refer to the "Installation Conditions" in page 13.

# 2. Specification for field supplied fuses and wire

# Functionality Streamer Duct Chamber Internal Structure

Reliable features always give you peace of mind

# **Filters Location Booster Fan** Streamer Unit Enhance Streamer discharge Streamer discharge decomposed element distribution. decomposed element distribution. Supply Intake Air Air **Dust Collection Filter Pre-Filter Deodorizing Filter** (MERV 14) Filter out coarse dust before entering Removes unwanted odour. Filter out fine dust. unit.

# **Filters Mechanism**



# **Dust Collection Filter (MERV 14)**

Particulate matter as small as 2.5 µm (micrometers) can be breathed deep into the lungs, rest assure that your air remains clean as the filter is able to remove particulate matter as small as PM2.5 with Dust Collection Filter (MERV 14) ratings in accordance to ASHRAE 52.2 Standards.

14

Product: Streamer Duct Chamber (Line-Up 1,2,3)
Testing Organization: Goldensea
Test Number: GS-GL-0817-2021-01/02,
GS-GL-0818-2021-01
Test Method: Filter performance test based on
ASHRAE 52.2-2017
Test result: The filter meets MERV 14 rating.

Standar Minimun Reportin

# **Dust Collection Filter (MERV 14) Replacement Period**

	Replacement	
PM2.5	PM10 peri	
18.5	28.5	12 months
35	65	6 months
	PM2.5 18.5 35	PM2.5         PM10           18.5         28.5           35         65

# **Deodorizing Filter**





52.2 Efficiency Value	Composite Average Particle Size Efficiency, y % in Size Range, µm			
	Range 1 (0.3-1.0)	Range 2 (1.0-3.0)	Range 3 (3.0-10.0)	
+	75%	90%	95%	

Replace with a new filter when clogging occurs. The left table shows the approximate replacement time when daily operation is 9 hours and annual operation are 240 days. It shows the calculation result for two air conditions. Adjust the replacement timing in consideration of the air environment in the area where the product is actually installed and the time and day it is operated.



Streamer technology is a unique Daikin technology that decomposes viruses, bacteria, allergens such as pollen, hazardous chemical substances such as formaldehyde, and odors with strong decomposing power.

# What is Streamer?

· Streamer discharge is a type of plasma discharge which generates high speed electrons that combine with oxygen and nitrogen in the air to form four kinds of decomposing elements with strong oxidative decomposition power. These four kinds of decomposing elements and thereby eliminate viruses, bacteria, allergens such as pollen, mold, mites (droppings and dead mites), hazardous chemical substances such as formaldehyde, and odors.

· Compared to standard plasma discharge (glow discharge), its speed of oxidative decomposition is over 1000 times greater with the same electrical power.

•The decomposition power is comparable to thermal energy of about 100,000°C.

# **Mechanism of Decomposition by Streamer**

Streamer emits high-speed electrons



The electrons collide and combine with oxygen and nitrogen in the air to form four kinds of decomposing elements with strong oxidative decomposition power. (Excited nitrogen/Excited oxygen/OH radical/Oxygen radical)







Caution 1 \*Comparison of oxidation decomposition. This does not mean temperature will become high.

Caution 2 \*There are effects in a Streamer test space and not verification results in an actual operation space



**Examples** 

Viruse

Allergens: pollen

Hazardous chemical substances:

formaldehyde

mold. mites

(droppings ar

dead mites)

Odors

# Clean air that reaches me...

# **Effective on Coronavirus**

**Demonstration test shows 99.9% inactivation** of the novel coronavirus (SARS-CoV-2) by Streamer technology after 3 hours

# **Demonstration Test Results**

inactivated by more than 99.7%, reaching more than 99.9% after 3

after 1 hour of Streamer irradiation. After 2 hours, it

# Virus survival rate 100% As a result of the test, SARS-CoV-2 75% was inactivated by more than 93.6% 50% 25%

hours of Streamer irradiation. Source: "Study report on the inactivation effect of plasma ion generator (Daikin Streamer) on SARS-CoV-2" written by Shigeru Morikawa, Department of Veterinary Medicine, Microbiology Course, Okayama University of Science.

# 0

# **Test Method**

Two acrylic boxes of about 31 L were mounted inside a safety cabinet. One box was equipped with a Streamer discharge device, and the other box was not. A see-saw rocking motion shaker was placed in each box, and a six-well plate was placed on top of the motion shaker Virus, solution measuring 0.5 ml was put into each well of the plates, and Streamer irradiation was performed while agitating the solution

> \*This product can be used to improve the quality of the air. However, this product is not Caution 3 intended for the creation of sterile environments or for the prevention pathogen infections

Scan here for more Daikin Streamer Research Institute







# Experiment results of the Streamer technology that have been verified so far.

# Viruses

Test target	Testing organaization	Test method	Report date
Norovirus	Kobe University Graduate School	ELISA method	12-Jan-2007
Influenza virus (Type A-H1N1)	Vietnam National Institute of Hygiene and Epidemiology	CPE observation	14-Sep-2009
Avian influenza virus (Type A-H5N1)	Vietnam National Institute of Hygiene and Epidemiology	CPE and TCID50	16-Apr-2009
Influenza virus (Type A-H1N1)	Kitasato Research Center for Environmental Science	CPE and TCID50	31-Jul-2009
Influenza virus (Type A-H3N2)	Shanghai City Center for Disease Control and Prevention, etc.	CPE and TCID50	8-Feb-2010
RS virus	Wakayama Medical University	CPE and TCID50	13-Apr-2012
Adenovirus		CPE and TCID50	
Coxsackievirus		CPE and TCID50	
Enterovirus	Kitasato Research Center for Environmental Science	CPE and TCID50	23-Jun-2017
Echovirus		CPE and TCID50	
Measles		CPE and TCID50	
Mouse Norovirus	The University of Tokyo Graduate School	CPE and TCID50	11-Oct-2018
Mouse Coronavirus	The University of Tokyo Graduate School	Plaque assay	28-Apr-2020
Novel Coronavirus (SARS-CoV-2)	Okayama University of Science	CPE and TCID50	8-Jul-2020

# Bacteria

Test target	Testing organaization	Test method	Report date
Escherichia coli		Pour plate culture method	8-Apr-2004
Staphylococcus aureus	Japan Food Research Laboratories	Pour plate culture method	8-Apr-2004
Enterotoxin		ELISA method	25-Aug-2004
Tubercle bacilli	Kitasato Research Center for Environmental Science	Plaque assay	8-Mar-2010
Tubercle bacilli	The Jikei University School of Medicine	PCR method	15-Feb-2010
Vancomycin-resistant enterococci (VRE)		Pour plate culture method	19-Feb-2010
Methicillin-resistant Staphylococcus aureus (MRSA)		Pour plate culture method	19-Feb-2010
Pseudomonas aeruginosa	Japan Food Research Laboratories	Pour plate culture method	12-Apr-2010
Bacillus, Serratia, and Arthrobacter		Pour plate culture method	29-Sep-2010
Escherichia coli		Pour plate culture method	10-Sep-2018
Moraxella bacteria		Pour plate culture method	10-Jun-2019

# Allergens

Test target	Testing organaization	Test method	Report date
Molds and mites (feces and carcasses)	Wakayama Medical University	Observation by electron microscope, ELISA method	14-Sep-2004
Pollen + exhaust gas + PM2.5	Yamagata University under the supervision of Professor Shirasawa,	IgE antibody test, ELISA method	8-Nov-2017
Mites (feces and carcasses) + cedar pollen	Tohoku Bunka Gakuen University	ELISA method	8-Nov-2017
Pollens (16 kinds)	L.S.L. Asaka Research Laboratory under the supervision of Project Professor Kusakabe, graduate school of the University of Tokyo	ELISA method	23-Jan-2020

# Molds

Test target	Testing organaization	Test method	Report date
Mold (Black mold)	Japan Food Research Laboratories	Pour plate culture method	28-Sep-2004

# 🕷 Hazardous gases

Test target	Testing organaization	Test method	Report date
Adjuvant suppression effect (DEP)	Wakayama Medical University National Institute for Environmental Studies	ELISA method	1-Nov-2005
Adjuvant (VOC)	Tohoku Bunka Gakuen University	Attenuation method	8-Dec-2006

This product can be used to improve the quality of the air by removing airborne hazardous chemical substances, allergens, mould, bacteria, and viruses, etc. However, this product is not intended for the creation of sterile environments or for the prevention pathogen infections.

This description relates to the Streamer technology devised by Daikin, but not to this Streamer Duct Chamber. Test results from use of the Streamer technology are generated according to prescribed test methods conducted by Daikin. Although the Streamer technology is contained within this Streamer Duct Chamber, this does not mean that precisely the same results will be experienced using this Streamer Duct Chamber. Actual results may differ depending on the conditions of product installation and use of the actual product, etc.

# Test Result for Streamer Duct Chamber

# JEM1467 Appendix D:

**Airborne Bacteria Removal Performance** 



### Test Organisation:

Tropical Infectious Diseases Research & Education Centre (TIDREC), Universiti Malaya

Test Number: (TS4-0390)

### Test Method:

Airborne removal of bactericidal activity of the Streamer Duct Chamber unit (BDEZ500A60VE) coupled with VAM150HVE unit installed in the Airborne Testing Chamber and testing method was based on JEM1467 (Appendix D), conducted in a room volume of 24.03 m<sup>3</sup>.

### Test Result:

Streamer Duct Chamber (BDEZ500A60VE) was able to remove more than 99.9% of airborne bacteria in 30 minutes of operation.

# **Experiment Setup**











### JEM1467 Appendix F: Bacteria Decomposition Performance



### Test Organisation:

Tropical Infectious Diseases Research & Education Centre (TIDREC), Universiti Malaya

Test Number: (TS4-0390)

### Test Method:

The antibacterial testing method the Streamer Duct Chamber unit (BDEZ500A60VE) coupled with VAM150HVE was based on JEM 1467 (Appendix F) standard, conducted in a room with volume of 31.2 m<sup>3</sup>.

### Test Result:

Streamer Duct Chamber (BDEZ500A60VE) was able to inactivate bacteria by 99.99% on MERV14 filter after exposure of 4 hours.

# Test Report from Universiti Malaya (Malaysia)

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ICTY STUDY C	F STREAME		
	SCHERICHIA	DUCT CHAME	ER (SDC) IN
Test rep	ort number:	5-0390	
s	tudy report fo	60	
AIKIN Researd Persiaran Buki Buloh	th and Develo Rahman Put Selangor, Ma	pmont Malayala ra 3, PO Box 79 laysia	Sdn Bhd 47000 Sungai
13	Submitted by		
pical Infectiou (TIDRE	s Diseases R C) Universiti	issarch and Ed Malaya	ucation Centre
Nat The PA Annu Labor La	Autor Del Se	Bazaly Abu Bakar	(Ph.D/Fabe)
in th 9.99% reduction	e condition of on of Escheric 31.2m <sup>1</sup> area	use: hia coli ATCC I	1739 in 4 h in a
	AJKON Research Persiaran Bukk Bukh yopical Infectious (TIDRE (TIDRE (Statistics International International Infection International Infection International International International International International International International International International International International International International International Internatione	AIKON Research and Develo Persianan Bukit Rahman Put Butoh, Selangor, Ma Submitted by: opical infectious Diseases R (TIDREC) Universiti 1 (TIDREC) Univers	AIKON Research and Development Malaysia Persiaran Bukit Rahman Putra 3, PO Box 78 Buboh, Selangor, Malaysia Submitted by: opical infectious Diseases Research and Ed (TIDREC) Universiti Malays (TIDREC) Universiti Malays (TIDREC) Universiti Malays (TIDREC) Universiti Malays Disease Research and Ed (TIDREC) Universiti Malays Portector TIBREC In the condition of use: 9.93% reduction of Escherichia coll ATCC I 31.2m <sup>3</sup> area

# Installation Conditions

### **Duct Type Indoor Unit**

For Duct Type Indoor Unit. Streamer Duct Chamber must be installed before the air conditioner unit to avoid condensation issue due to cold air draft.



# **Outdoor Air Processing Unit**

For Outdoor Air Processing Unit that combine fresh air treatment and air conditioning. Streamer Duct Chamber must be installed before the air conditioner unit to avoid condensation issue due to cold air draft. Besides, it can avoid OAPU to get dirty from the outdoor polluted air.



# Heat Reclaim Ventilator (VAM Series)

For Heat Reclaim Ventilator (VAM Series). Streamer Duct Chamber can be installed in either Location 1 or Location 2. However, Location 1 is hightly recommended in order to avoid VAM to get dirty from the outdoor polluted air.



# Installation Position for Each System

- If the temperature and humidity inside the ceiling exceed 30°C or RH80%, apply additional insulation materials to the main unit. Refer to engineering data for operating areas. Use glass wool or polyethylene foam as insulation not thicker than 10 mm and fits inside the ceiling opening.
- If the unit intakes foggy, misty, or humid air, water droplets will drip from the air filter or heat exchange element, causing water leakage or failure. If the room is under negative pressure or if there is a strong outside wind, the unit may intake outside air even when the unit is not in operation. In such cases, install an electric shutter, etc., to prevent outside air from coming in.
- (1) Select an installation site where the following conditions are fulfilled
- Location with sufficient strength and stability (beams, ceiling, and other locations capable of fully supporting the weight of the unit). Insufficient strength may result in the unit falling over and causing injury. It may also cause vibration and unusual noise.
- Where nothing blocks the passage.
- Where the Unit is not in direct contact with the ceiling or wall. If the unit is in contact with the ceiling or wall, it can cause vibration.
- Where sufficient service space and space for duct connection can be secured.
- $\boldsymbol{\cdot}$  Where the unit is not in direct contact with the ceiling or wall.
- Where ceiling materials are present (this unit can be installed only above the ceiling). In the absence of ceiling materials. The unit may make noise in quiet places.
- (2) Suspension bolts are used for installation. Check whether the installation location can withstand the weight of the main unit and, if necessary, reinforce the location with beams, etc., before installing the unit.

# Display panel

# Stylish outlook, without affecting the building interior design



Streamer Off

Streamer On



# Specification

OVE					
-10 to 50					
pcs)					
o 1pc only)					

# Pressure Drop Chart

**Pressure drop chart in each model is as below.** Please select the model according to the airflow range required for the entire air conditioning system.









On off/ Standby Indicator Eror indicator LED Streamer backlight

Error indication on

# CAUTION

 Keep the Streamer Duct Chamber and the Streamer display unit least 1 m away from televisions, radios, stereos, and other similar equipment. This may cause distorted picture or noise.

Reset button

- Turn off the main power supply when it is not used for long periods of time. When the main power switch is turned on, some watts of electricity is being consumed even if the system is not operating.
- Do not install the Steamer display unit where direct sunlight may fall on it. This may cause discoloration or deformation.



# **Product Features**



Set point temperature can be selected similar to normal VRV indoor unit.



# **3 Steps Airflow**

3 airflow levels (H/M/L) can be selected, which enhance usage and design flexibility.



59%

### **Filter Options** The filter options of MERV8 and MERV14 are available.



10:

### Slim & Compact Design

Only 300 mm in height and 700 mm in depth, the new casing comes with smaller footprint and with 59% reduction\* in unit size. Reduction in size compared to conventional FXMQ200/250MF series



### **DC Motor** The change from AC motor to DC motor



# **Extended Operation Range**

resulted in lower power consumption and

Extended operation range: Cooling: 15°CDB to 43°CDB

more energy efficiency.

### **VRT Control**



With the VRT\* control feature, highest efficiency can be achieved. \*Default setting is VRT off.

### **Lower Power Consumption**

The new FXMQ-BF series requires 79% less power making it the perfect choice for small commercial applications. \*Reduction of power consumption refer from comparison with 22.4kW model (FXMQ-MF series).

# Specifications

Model name			FXMQ80BFV24	FXMQ140BFV24	FXMQ200BFV24	FXMQ250BFV24			
Power supply			1 phase, 220 V, 50 Hz						
		Btu/h	30,700	54,600	76,400	95,500			
*1 *2 Cooling	сарасіту	kW	9.0	16.0	22.4	28.0			
Power consump	otion	kW	0.080	0.100	0.115	0.180			
Casing				Galvanised	l steel plate				
Dimensions (H>	(W×D)	mm	300×700×700	×700×700 300×1,000×700 300×1,400×700					
		m³/min	11.5/8.6/5.8	20.5/15.4/10.3	29.0/21.8/14.5	36.0/27.0/18.0			
Airflow rate (H	/M/L)	l/s	192/143/97	342/257/172	483/363/242	600/450/300			
		cfm	406/304/205	724/544/364	1,024/770/512	1,271/953/635			
External static	pressure	Ра	Rated 100 (200-50)						
Air filter			*3						
	Liquid	mm		φ9.5	(Flare)				
Piping	Gas	mm	φ15.9	(Flare)	φ19.1 (Brazing)	φ22.2 (Brazing)			
connections	Drain	mm		VP25 (External dia.	32, Internal dia. 25)				
Machine weigh	t	kg	28	36	46	47			
Sound level (H/	M/L)	dB(A)	37.5/30/23	41/34/25	42/35/26	44/36/27			
★4 Operation range °CDB			15 to 43						

Notes:

- \*1 The cooling capacity is the maximum value under the following conditions: Indoor temp.: 33°CDB, 28°CWB / outdoor temp.: 33°CDB, Piping length: 7.5m. The rated external static pressure and air volume are set in ().
- \*2 Capacities are net, including a deduction for indoor fan motor heat.
- \*3 Air filter is not standard accessory, but please mount it in the duct system of the suction side. Select its dust collection efficiency (gravity method) 50% or more.
- \*4 Operation range can be extend to 15°C by field setting. When the unit is all fresh air (OAPU) connection under cooling operation, the operation limit is at 19°C - 43°C. (extend of operation range is not available.)
- 5 VRT can be activated with remote controller thermistor and outdoor field setting.

### Remarks:

- 1. This machine cannot be used to handle internal heat loads. The blowout temperature changes depending on the air conditioning load, outside air temperature, and operation of the protective device. When the protection function is activated, unprocessed outside air maybe sent directly.
- 2. When this unit is connected to another indoor unit, the outside air processing mixing ratio must be as follows: The total content capacity should be A% or less when the unit is connected. A:B = 100:40 / A:B = 110:30 / A:B = 120:20 / A:B = 130:10
- 3. During cooling operation, if the ceiling temperature exceeds 30°C and relative humidity reaches 80%, or fresh air is inducted into the ceiling, heat insulation material (glass wool or polyethylene foam, thickness: 10 mm or more) is required to prevent dew condensation.

# Option List

Option name		FXMQ80BFV24	FXMQ140BFV24	FXMQ200BFV24	FXMQ250BFV24			
Filter	MERV8	BAF376B56	BAF376B80	BAF37	6B160			
Filter	MERV14	BAF377B56	BAF377B80	BAF37	7B160			
Filter chamber		KDDF37AA56	KDDF37AA80	KDDF37	7AA160			
Long life replacement filter		KAF371B56	KAF371B80	KAF371B160				
Service panel		KTBJ25K56F	KTBJ25K80F	KTBJ25K160F				
Air discharge adaptor		KDAJ25K56A KDAJ25K71A KDAJ25K140A						
Stylich remote controller	White	BRC1H63W						
Stylish remote controller	Black	BRC1H63K						
Navigation remote controller			BRC	1E63				
Simplified remote controller		BRC2E61						
Wireless remote controller			BRC4C66*1					
Remote sensor (for indoor temperat	ure)	BRCS01A-6						

Notes:

- \*1 Remote sensor is necessary when using wireless remote controler.
- \*2 Refer to Engineering Data for full list of optional accessories.

# - Components of Indoor Air Quality-



FXMQ-BFV(24)



MERV8



MERV14

-> Air processing

Ventilate occupied space by supplying the fresh air and filtrate the air with MERV filters to enhance the IAQ while able to maintain the comfortability with

room temperature

control feature.

V8



### Hotel

- Maintains the best IAQ with room temperature control and fresh air ventilation in guest rooms and common areas.
- By maintaining ideal temperature and humidity, the unit could save future costs by extending the life cycle of furniture and appliances.



# - Benefits to Various Application Types



### Supermarket

Ventilation  $\circ$ 

Provide outdoor air ventilation beyond

reduce risk of air

borne disease.

Filtration

Filter that achieve MERV14 or

better grade can help remove infectious aerosol for recirculated air.

the minimum requirement to

- Provides fresh air to closed space that are typically crowded such as supermarkets and grocery stores to reduce the risk of airborne transmitted diseases.
- The new 9kW capacity model is the perfect fit for smaller business such as small/medium-sized shops and convenience stores.

### **Office/School**

- Many hours were spent in school/office in one day, maintaining comfortability with fresh air and precise room temperature control is essential.
- Improves IAQ to help prevent occupants from allergies, sick building syndrome (SBS) and building-related illnesses (BRI).



### Factory

- Enhances the IAQ of the production areas where machines may generate dusty atmosphere and other contaminants.
- Maintains comfortability and precise temperature control in large areas with the remote sensor option BRCS01A-6.



### **Restaurant/Kitchen**

- Freshens up the air by introducing fresh air while reducing the presence of unpleasant smell such as smokes, food smells, and stale air from the cooking area.
- With the MERV14 filter options, it is able to capture the airborne particles between 1 µm to 3 µm size range at 90% efficient rate\*.
   \*ANSI/ASHRAE Standard 52.2-2017 P.44



YRY

**Indoor Unit** Round Flow Cassette with Sensing and Streamer **Round Flow Cassette with Streamer** 

> **FXFTQ-AV FXFRQ-AV**



# Daikin Streamer Technology

Daikin Streamer Technology enhances maximum efficiency in cleaning, which uses powerful decomposition properties to decompose substances captured by filter for better air quality.





Wired remote controller	Mode	l name
BRC1H62W/K	FXFTQ-A	FXFRQ-A
Streamer function unit	1	1
Dual sensors*	1	×
Sensing sensor low mode*	1	×
Sensing sensor stop mode*	1	×
Circulation airflow	×	×
Individual airflow direction control	1	1
Switchable 5 step fan speed	1	1
Auto airflow function (Draft prevention)*	1	×
Auto swing	1	1
Selectable airflow pattern	×	×
Swing pattern selection	1	1
High ceiling application	1	1

Note : \*Applicable when sensing panel is installed

FEATURES

**FXFRQ : Round Flow Cassette with Streamer** 



Based on preset user conditions, the system automatically stops operation if the room is unoccupied \*Adjustment is possible for shift time and set temperature by local setting.

built-in inside the indoor unit for efficient cleaning

### Remarks:

- 1) Only the remote controller BRC1H63W(K) can be connected for ON / OFF operation of the streamer.
- 2) Streamer function operates when the fan stops after the air conditioning operation is stopped. The maximum operation of streamer is 180 minutes per day. (This function is available only when the remote controller BRC1H63W(K) is connected.)



**Stylish Remote Controller** BRC1H63W/K

# **FXFTQ : Round Flow Cassette with Sensing and Streamer**

Individual airflow direction control



### **Specifications**

MOD	EL NAME		FXFTQ25AV4	FXFTQ32AV4	FXFTQ40AV4	FXFTQ50AV4	FXFTQ63AV4	FXFTQ80AV4	FXFTQ100AV4	FXFTQ125AV4	FXFTQ140AV4	
Power supply				1-phase, 220 V, 50 Hz								
Continue and its		Btu/h	9,600	12,300	15,400	19,100	24,200	30,700	38,200	47,800	54,600	
		kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0	
Power consumption	Cooling	g kW	0.0	)28	0.035	0.056	0.061	0.092	0.164	0.170	0.194	
Casing						G	alvanised steel pla	ate				
A : # flow + works / 1 1/1 1 1 A / 1 A / 1 A	1.4.)	m³/min	13/12.5/11.5/11/10 17/13.5/12		17/13.5/12.5/12/11	23/20.5/19/14.5/11	23.5/21/20/16/13.5	24.5/22/20.5/20/15	33.5/30.5/27/23.5/21	34.5/31.5/28.5/25.5/23	35.5/32.5/29.5/26.5/23	
AITTIOW Falle (H/HIVI/IVI/IVI	IL/L)	cfm	459/441/406/388/353		600/477/441/424/388	812/724/671/512/388	830/741/706/565/477	865/777/724/706/530	1,183/1,077/953/830/741	1,218/1,112/1,006/900/812	1,253/1,147/1,041/935/812	
Sound level (H/HM/M/M	L/L)	dB(A)	30/29.5/28.5/28/27 35		35/29.5/29/28/27	38/35/34.5/29.5/27	38/36/35.5/31.5/28	39/37/36/35.5/31	44/41/38/35/33	45/42.5/39.5/37/35	46/43.5/40.5/38/35	
Dimensions (H×W×D)		mm			256×8	40×840		298×840×840				
Machine weight		kg		19		24	22		25		26	
	Liquid (Flare)			φ (	¢ 6.4		¢ 9.5					
Piping connections	Gas (Flare)	mm		¢ 1	2.7		¢ 15.9					
	Drain				VP25 (External Dia. 32/Internal Dia. 25)							

MODEL NAME			FXFRQ25AV4	FXFRQ32AV4	FXFRQ40AV4	FXFRQ50AV4	FXFRQ63AV4	FXFRQ80AV4	FXFRQ100AV4	FXFRQ125AV4	FXFRQ140AV4		
Power supply					1-phase, 220 V, 50 Hz								
Btu/h		Btu/h	9,600	12,300	15,400	19,100	24,200	30,700	38,200	47,800	54,600		
			kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0	
Power consumption	Cod	oling	kW	0.0	)29	0.036	0.040	0.063	0.096	0.158	0.178	0.203	
Casing							G	alvanised steel pla	ite				
Airflow rate (H/HN/N/N/	11.71.)	n	m³/min	13/12.5/11.5/11/10		17/13.5/13/12/11	18/17/13.5/12.5/11	21/20/16/15/13.5	22.5/21.5/21/20/15	32/29/26/23/21	33/30.5/28/25.5/21	35.5/32.5/29.5/26.5/23	
	IL/L)		cfm	459/441/406/388/353		600/477/459/424/388	635/600/477/441/388	741/706/565/530/477	794/759/741/706/530	1,130/1,024/918/812/741	1,165/1,077/988/900/741	1,253/1,147/1,041/935/812	
Sound level (H/HM/M/M	L/L)	(	dB(A)	30/29.5/28.5/28/27		35/29.5/29/28/27	35/33.5/29.5/28.5/27	36/35.5/31.5/31/28	37/36.5/36/35.5/29.5	43/40.5/37.5/35/33	44/41.5/39/36.5/33	46/43.5/40.5/38/35	
Dimensions (H×W×D)			mm	256×840×840 298×840×840									
Machine weight			kg	19				2	22 25 26			26	
	Liquid (Flare)	e)			φ	6.4			¢ 9.5				
Piping connections	Gas (Flare)		mm		<b>\$</b> 1	2.7			¢ 15.9				
D	Drain					VP25 (External Dia. 32/Internal Dia. 25)							

Notes: Specifications are based on the following conditions; • Cooling: Indoor temp.: 27°CDB, 19°CWB, Outdoor temp.: 35°CDB, Equivalent piping length: 7.5 m, Height difference: 0 m.

Capacity of indoor unit is only for reference. Actual capacity of indoor unit is based on the total capacity index. (See Engineering Data Book for details.)
 Sound level: Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre.

During actual operation, these values are normally somewhat higher as a result of ambient conditions

### **Option list**

Name of op	tion	MODEL NAME	FXFTQ25,32,40,50,63,80AV4 FXFTQ100,125,140AV4		FXFRQ25,32,40,50,63,80AV4	FXFRQ100,125,140AV4	
Standard nan	ol with consing	Fresh white	BYCQ1	25EEF	-		
Black		Black	BYCQ1	25EEK	-		
Ctondard nan	al	Fresh white	BYCQ1	25EAF	BYCQ1	25EAF	
Standard pan	e	Black	BYCQ1	25EAK	BYCQ1	25EAK	
Panel spacer			KDB55	J160F	KDB55	J160F	
Fresh air	Chamber type 1,2,4	Without T-duct joint	KDDP55C160 [Components: KD	DP55C160-1, KDDP55C160-2]	KDDP55C160 [Components: KD	DP55C160-1, KDDP55C160-2]	
intake kit	Chamber type	With T-duct joint	KDDP55C160K [Components: KD	DDP55C160-1, KDDP55C160K2]	KDDP55C160K [Components: KI	DDP55C160-1, KDDP55C160K2]	
	Direct installation type 3		KDDP55	5X160A	KDDP55X160A		
Replacement long-life filter		KAF5511D160		KAF5511D160			
Branch duct o	hamber		KDJP55C80	KDJP55C160	KDJP55C80	KDJP55C160	
Insulation kit	for high humidity ⁵		KDTP55K80A KDTP55K160A		KDTP55K80A KDTP55K160A		
Stylish remote	e controller 6		BRC1H63W/	/BRC1H63K	BRC1H63W/BRC1H63K		
Adaptor for v	viring (operation status ou	itput) 7	BRP11	1B62	BRP11B62		
Digital input a	adaptor 7		BRP7	A52	BRP7A52		
Wiring adapte	or for electrical appendices	s <sup>7</sup>	KRP4A	AA53	KRP4AA53		
Installation bo	ox for adaptor PCB		KRP1F	198A	KRP1H98A		
Remote sense	or		BRCSC	)1A-5	BRCS01A-5		
External contr	rol adaptor for outdoor ur	nit 7	DTA10	)4A62	DTA10	4A62	
Multi tenant f	for indoor unit (24V free t	ype) 7	BRP11	4A61	BRP114A61		
Multi tenant i	for unit booster (24V free	type)	BRP11	4A63	BRP114A63		

Notes: 1. When installing a fresh air intake kit (chamber type), two air outlet corners are closed.
 It is recommended that the volume of outdoor air introduced through the kit is limited to 10% of the maximum airflow rate of the indoor unit. Introducing higher quantities will increase the operating sound and may also influence temperature sensing.
 The volume of fresh air for direct installation type is approximately 1% of the indoor unit airflow. The chamber type is recommended when more fresh air is necessary.
 Please order using the names of both components instead of set name.
 Please use in case temperature/humidity inside ceiling may get over 30°C, 80% RH.

6. Wiring for wired remote controller should be obtained locally

7. Installation box for adaptor PCB (KRP1H98A) is necessary.



# Pure air with a simple step



# MERV 8 DAIKIN AIR FILTER



# Features and Benefits

# **Pure Air**

# **MERV 8** Rating

This filter is a high performance prefilter that has achieved MERV 8 rating.

### ✓ PM2.5 Filtration

This filter can catch fine particles that could not be removed by the existing prefilter, capturing 97% of 1.0-3.0  $\mu$ m particles and 99% of 3.0-10  $\mu$ m particles when air passes through filter 10 times.

### **V** Filter Exchange Twice a Year

Replace the filter twice a year in order to maintain the filter's high performance.

# Simple Step

# ✓ Chamberless Filter

Additional parts and difficult installation works are unnecessary. Just replace the existing prefilter.

# Retrofit to Existing Indoor Unit

Attachable to your current round flow cassette for IAQ improvement.



# Filter Efficiency

Our in-house test results have proven that this filter can meet the MERV 8 standard.

In addition, as the air conditioning system continues to operate, the air in the room will pass through this filter many times. As a result, more harmful substances in the air can be captured.

For example, more than 97% of 1.0 - 3.0 µm sized substances, including PM2.5, can be collected by circulating air through the filter 10 times.



Percentage of 3.0 – 10.0 µm particles remaining in the indoor air \*1



\*1. This figure is simulated based on the actual measured data of one-pass performance and assumes that particles do not occur continuously in the room. By repeating the one-pass performance about 2~10 times, it can expect the attenuation as shown in the figure.



# DAIKIN AIR FILTER High performance prefilter BAF552A160

Model Name			BAF552A160		Note 1. It is necessary to set a high		
Brand			DAIKIN		crease in air volume when installing		
Production Base			AAF Malaysia		the filter. The setting number differs		
Performance			MERV 8		according to each model. Please refer		
Dimensions	mm	526 x 523 x 35			to the installation manual.		
Airflow rate	m³/min	13.0	22.9	37.0	*2. This result is based on the test of the filter only. The results may be different in the actual use en-		
Initial Pressure Drop*2	Ра	18.1	35.8	81.4	vironment where the filter is installed in the indoor unit.		
Weight	g		520		*3. Filter lifetime may vary depending on the condi-		
Lifetime * <sup>3</sup>		6 months (1,250 hours)			tion of the operating environment. Certain instances such as high traffic areas, pets or		
Reuse			Non-reusable		smokers in a residence, or other situations may re- quire more frequent changes.		



### Fig. 1 Criteria for achieving MERV 8 (ASHRAE52.2 : 2017)

	Composite Average Particle Size Efficiency, % , In Size Range, μm								
MERV	<b>E1 Range</b> (0.3 - 1.0)	<b>E2 Range</b> (1.0 - 3.0)	<b>E3 Range</b> (3.0 - 10)	10 µm ~					
1 - 4	n/a	n/a	<20	Effective for collecting					
5	n/a	n/a	<20	-					
6	n/a	n/a	35≤	-					
7	n/a	n/a	50≤	-					
8	n/a	<b>20</b> ≤	<b>70</b> ≤	-					
9	n/a	35≤	75≤	-					
10	n/a	50≤	80≤	-					
11	20≤	65≤	85≤	-					
12	35≤	80≤	90≤	-					
13	50≤	85≤	90≤	-					



Minimum efficiency reporting value (MERV) is a filter rating system devised by ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) to standardize and simplify air filter efficiency ratings for the public.

The higher the MERV rating, the higher the effectiveness of the air filter.





# VRV

Indoor Unit	Panel		
Round Flow Cascette with Sensing	EXESO-4*	Standard panel	BYCQ125EAF(K)
Round now casette with sensing		Standard panel with sensing	BYCQ125EEF(K)
Round Flow Cassette	FXFQ-A*	Standard panel	BYCQ125EAF(K)
Ceiling Mounted Cassette (Round Flow with Sensing) Type	FXFQ-S	Standard panel	BYCQ125B-W1
Ceiling Mounted Cassette (Round Flow) Type	FXFQ-L	Standard panel	BYCP125K-W1
Round Flow Cassette Type	FXFQ-P	Standard panel	BYCP125K-W1

\* Cannot be used for Designer panel and Auto grille panel

# Sky/Air

Indoor Unit	Panel		
Ceiling Mounted Cassette Type Round Flows (R32)	FCF series*	Standard panel	BYCQ125EAF(K)
Celling Mounted Cassette Type <round flow=""> (R32)</round>	FCFC series*	Standard panel with sensing	BYCQ125EEF(K)
Ceiling Mounted Cassette Type <round flow=""> (R410A)</round>	FCQ series FCNQ series	Decoration panel	BYCP125K-W1

\* Cannot be used for Designer panel and Auto grille panel

# Easy Replacement

The existing prefilter can be replaced easily\*.

Since it's a chamberless filter, the installer will remove the existing prefilter and replace it with the high performance prefilter.



\* The filter should be fixed to the air conditioner with attached components, so consult your dealer when installing or replacing the filter.

### **VRV** is a trademark of Daikin Industries, Ltd.

VRV Air Conditioning System is the world's first individual air conditioning system with variable refrigerant flow control and was commercialised by Daikin in 1982. VRV is the trademark of Daikin Industries, Ltd., which is derived from the technology we call "variable refrigerant volume."

Specifications, designs and other content appearing in this brochure are current as of August 2021 but subject to change without notice.

# **VAM-HVE Series**





# Airflow Control

# Good quality air for every day

Controlling the necessary elements will improve the quality of ventilation.



Air conditioning load is reduced by heat recovery.



# **Class 1 Ventilation** Both supply air and exhaust air are controlled by mechanical ventilation in order to achieve stable ventilation when required. For common ventilation usage, Class 1 ventilation is able to meet the requirement. "For example: Heat Reclaim Ventilator"



# Fresh up Operation

By changing the airflow balance, positive pressure or negative pressure in a room can be achieved in order to prevent pollutants from entering or flowing out.

### Supply fresh up operation increases the supply air volume to prevent pollutants from entering into the room.

For example, it keeps outdoor pollen and dust from entering when doors are opened or closed, or through daps in windows.



By positive pressure in the room, the entering of dirty outside air, odors and moisture when opening and closing of doorway is prevented.







### Exhaust fresh up operation will increase exhaust air volume to prevent pollutants from flowing to other area.

For example, to prevent dirty air generated indoors from flowing out in through windows and doors, the indoor air is kept under negative pressure and discharged.



Example: Conference Room

By negative pressure in the room, contaminated air and moisture from the room is prevented from leaking into other areas.



During increase in CO<sub>2</sub> level in the room, ventilation air volume will be increased to have higher air exchange in order to reduce the  $CO_2$  level in room.

### Human occupancy is reflected as CO<sub>2</sub> concentration

Change in CO<sub>2</sub> concentration in conference room





Experimental data: CO 2concentration in the conference room Closed conference rooms often tend to have stagnant air flow In long meeting duration or meeting with full occupancy, the concentration of CO increases due to the exhaled CO2 from human and causes decrease in mind concentration. In order to achieve effective ventilation in short period, mechanical ventilation and natural ventilation should be combined to replace the air

Image is for illustrative purpose

# Equipped with a CO<sub>2</sub> sensor to automatically control the ventilation volume according to the CO<sub>2</sub> concentration.

Low airflow when there are low occupancy



New Wired Controller (BRC1H63W/K)



With the new wired controller, BRC1H63W/K, the airflow is able to be automatically controlled based on CO<sub>2</sub>concentration and CO goncentration is able to be visualized on the screen\*.

\*Optional accessory CO2 sensor is required for this

This CO2sensor cannot be used as CO 2 measurement tool. CO 2concentration value will subject to change depending on the room condition and environment.

# Energy saving ventilation (interlocked with air conditioner)

Air conditioner and ventilation system can be interlocked to provide even greater comfort and energy saving.

The system can be interlocked with Daikin air conditioners to provide energy saving ventilation solution for various situation.



### Sensing sensor stop mode

In situation of no human occupancy is detected, the operation is turned off. When the "Sensing sensor" installed on the air conditioner detects no occupancy in the room, the ventilation system and air conditioner system is turned off automatically to reduce energy wastage.



### Pre-cooling / Pre-heating control

The operation of ventilation system is delayed during this mode.

During first start up of the air conditioner, the start up operation of ventilation system is delayed in order to reduce additional heat load from outside air. This will reduce power consumption for the air conditioner as well.



- \*During group controlling of air conditioner, no occupancy stop mode cannot be used. Please refer to VRV general catalogue for the target indoor units
- \*During 24-hours ventilation mode is turned on, the normal operation mode is changed to 24-hours ventilation mode.
- \*Once the absence is detected and stopped, the operation will not be performed automatically again

\*Delay timer settings can be adjusted.

### Auto-ventilation Mode Changeover Switching

Automatically switches the ventilation mode (Total Heat Exchange Mode/Bypass Mode) according to the operating status of the air conditioner.

When the cooling operation is required in winter, use of heat recovery ventilation is not efficient because the outdoor air temperature is normally lower than that of the indoor. Thus, the proper use of ventilation mode enhances the heating / cooling efficiency.

In addition by installing a humidity sensor (optional), automatic switching by heat (energy) or discomfort index is possible which further improves energy efficiency and comfort.





### Nighttime free cooling operation

Nighttime free cooling operation is an energy-conserving function that works at night when air conditioners are off. By ventilating rooms containing office equipment that raises the room temperature, nighttime free cooling operation reduce the cooling load when air conditioners are turned on in the morning. It also alleviates feelings of discomfort in the morning caused by heat accumulated during the night.

- When connected to air conditioners, operation of heat reclaim ventilator is controlled according to the set temperature, outside air temperature and room temperature.
- When using only ventilation unit, operation of heat reclaim ventilator is controlled according to the set temperature on remote controller.
- Nighttime free cooling operation is possible during air conditioners linked operation by centralized control.
- Nighttime free cooling operation is set to "off" in the factory settings, so if there is a need to turn on, please contact Daikin dealer

# Improved installation method

- 1. Improved installation process by changing the dimension and shape of liftina lua
- The nut dropout prevention structure eliminates the need to replace the lifting lug even when mounting upside down.
- It also prevents the anti-vibration lifting lug from interfering with the equipment. 2. Improved duct installation process with new duct connector location
- The duct connector is adjusted to be parallel to each other in order to ease duct installation process.
- 3. Improves controllability by input / output signals and simplifies various wiring work
- Operation, ventilation volume, and ventilation mode can be switched by external contact input.
- Output signal terminal for external dampers.
- Output signal terminal for abnormal signals and filter signs.

The indoor accumulated heat is discharged at night. This reduces the air conditioning load the next day thereby increasing efficiency.



The load is small so the temperature is

rapidly reduced to a comfortable level nterlocked operation with an air conditioner



### Application Example

# stage.





In the case of windows and doors are located at the front only, there will be no air movement at the back of the shop. Air will be stagnant and not well ventilated.

Heat Reclaim Ventilator must be installed to provide effective mechanical ventilation.

As a result, airflow is able to ventilate all areas of the shop



# **TECHNICAL SPECIFICATIONS**

	Unit			90-	001		D I	00			
	Model			VAM150HVE	VAM250HVE	VAM350HVE VAM500HVE VAM650HVE					
Power Supply				1-phase, 220-240 V, 50 Hz							
	For	Ultra-High		66.0 / 66.0	60.5 / 60.5	65.0 / 65.0	61.5 / 61.5	59.5 / 59.5			
Temp.	Cooling	High	%	66.0 / 66.0	60.5 / 60.5	65.0 / 65.0	61.5 / 61.5	59.5 / 59.5			
Exchange		Low		69.0 / 69.5	65.0 / 65.5	70.0 / 70.0	63.0 / 64.0	62.5 / 63.0			
(50 Hz)	For	Ultra-High		77.0 / 77.0	76.5 / 76.5	79.5 / 79.5	80.0 / 80.0	74.5 / 74.5			
. ,	Heating	High	%	77.0 / 77.0	76.5 / 76.5	79.5 / 79.5	80.0 / 80.0	74.5 / 74.5			
		Low		78.5 / 79.0	78.5 / 79.0	81.5 / 82.0	81.5 / 82.5	76.5 / 77.0			
	Бал	Ultra-High		63.5 / 63.5	60.0 / 60.0	62.5 / 62.5	62.5 / 62.5	60.0 / 60.0			
Enthalov	Cooling	High	%	63.5 / 63.5	60.0 / 60.0	62.5 / 62.5	62.5 / 62.5	60.0 / 60.0			
Exchange Efficiency	_	Low		66.0 / 66.5	61.5 / 62.0	64.5 / 65.0	64.0 / 65.0	62.5 / 63.0			
	_	Ultra-High		71.5 / 71.5	69.5 / 69.5	72.0 / 72.0	71.0 / 71.0	68.0 / 68.0			
(00112)	For Heating	High	%	71.5 / 71.5	69.5 / 69.5	72.0 / 72.0	71.0 / 71.0	68.0 / 68.0			
	<b>J</b>	Low		76.5 / 77.0	73.0 / 73.5	74.5 / 75.0	72.5 / 73.5	69.5 / 71.5			
	Heat	Ultra-High		96-103 / 132	126-141 / 172	178-193 / 231	296-326 / 390	381-426 / 472			
	Exchange	High	w	W 90-93 / 118 114-123 / 144 163-170 / 207 2		248-261 / 329	307-319 / 413				
Power Consumption (50 Hz)		Low		68-73 / 67	75-83 / 79	132-142 / 145	223-233 / 268	264-276 / 332			
		Ultra-High		96-103 / 132	126-141 / 172	178-193 / 231	296-326 / 390	381-426 / 472			
<b>`</b>	Bypass	High	w	90-93 / 118	114-123 / 144	163-170 / 207	248-261 / 329	307-319 / 413			
	Niode	Low	1 1	68-73 / 67	75-83 / 79	132-142 / 145	223-233 / 268	264-276 / 332			
	Hoot	Ultra-High		33.0-34.0 / 34.0 33.0-34.0 / 33.5 32.0-33.0 / 34.5		36.0-37.0 / 38.5	37.5-38.0 / 38.0				
	Exchange	High	dB(A)	30.5-32.0 / 28.0	31.0-32.5 /28.0	30.0-31.5 / 27.5	35.0-36.0 / 35.0	36.0-36.5 / 37.0			
Sound Level	Mode	Low		23.0-25.5 / 20.0	23.0-25.5 / 21.0	26.5-28.5 / 22.0	32.0-34.0 / 31.0	34.0-35.0 / 32.5			
(50 Hz)	-	Ultra-High		33.5-34.0 / 36.0	33.0-34.0 / 34.5	32.5-33.5 / 34.5	36.0-37.0 / 38.5	39.5-40.0 / 42.0			
	Bypass	High	dB(A)	31.5-33.0 / 28.5	31.5-32.5 / 29.0	31.0-32.0 / 27.5	35.0-36.0 / 35.0	38.0-38.5 / 39.0			
	wode	Low	1 1	23.0-25.5 / 20.5	23.5-25.5 / 21.5	27.0-29.0 / 23.0	32.0-34.0 / 31.0	35.5-36.5 / 33.5			
Casing				Galvanised steel plate							
Insulation Materi	al			Self-extinguishable polyurethane foam							
Dimensions (H x	W x D)		mm	278 x 55	51 x 810	306 x 800 x 879	306 x 800 x 879 338 x 832 x 973				
Machine Weight			kg	22	22	31	41	43			
Heat Exchange S	System			A	ir to air cross flow tota	I heat (Sensible heat -	+ latent heat) exchang	e			
Heat Exchange	Element Mat	erial			Specially p	rocessed nonflamma	ble paper				
Air Filter				Multidirectional fibrous fleeces							
	Туре					Sirocco fan					
	Ainflow	Ultra-High		150 / 150	250 / 250	350 / 350	500 / 500	650 / 650			
	Rate	High	m³/h	150 / 150	250 / 250	350 / 350	500 / 500	650 / 650			
<b>Fee</b>	(50 Hz)	Low		100 / 80	165 / 145	275 / 235	470 / 420	570 / 495			
ran	External	Ultra-High		125-140 / 155	115-130 / 135	170-185 / 230	165-190 / 245	185-190 / 260			
	Pressure	High	Ра	100-120 / 100	80-90 / 60	145-165 / 80	140-175 / 180	140-155 / 210			
	(50 Hz)	Low		44-80 / 28	35-75 / 20	90-102 / 36	124-155 / 127	108-119 / 122			
	Motor Out	out	kW	0.03	0 x 2	0.060 x 2	0.100 x 2	0.170 x 2			
Net Supply Airflo	w Ratio	Ultra-High	%	90	90	90	90	90			
Compaction D	Diamont	Indoor side	mm	-100	-150	-150	-000	-000			
Connection Duct	Diameter	Outdoor side	mm	φιυυ	φ150	φ150	φ200	φ200			
Unit Ambient Cor	ndition			-15°C — 50°C DB, 80%RH or less							

\* Values for electrical current, power consumption, and efficiency are at the above above-stated airflow,

\* Exchange efficiencies are values based on performance codes and air conditions that comply with JIS B8628:2017.

\* Temperature exchange efficiency and enthalpy exchange efficiency vary according to the ratio of supply air and exhaust air and air conditions. \* Operation sound is an anechoic chamber conversion that complies with JISB8628:2017. When measured under actual installation conditions, the operation sound is usually greater due to ambient

\* Since the sound level of this specification is the noise level at the rated external static pressure, it will be higher on the display than the G type model as the external static pressure improves.

# **TECHNICAL SPECIFICATIONS**

	Unit				00					
	Model			VAM800HVE	VAM1000HVE	VAM1500HVE	VAM2000HVE			
Power Supply					1-phase, 220-240	V, 50 Hz	•			
		Ultra-High		61.5 / 61.5	58.0 / 58.0	61.5 / 61.5	58.5 / 58.5			
Temp	For	High	%	61.5 / 61.5	58.0 / 58.0	61.5 / 61.5	58.5 / 58.5			
Exchange	Cooming	Low		64.0 / 65.0	61.5 / 62.0	65.5 / 66.0	65.5 / 65.5			
Efficiency	Es a	Ultra-High		77.5 / 77.5	74.0 / 74.0	77.5 / 77.5	73.5 / 73.5			
(50 HZ)	Heating	High	%	77.5 / 77.5	74.0 / 74.0	77.5 / 77.5	73.5 / 73.5			
	Ű	Low		78.5 / 79.5	76.0 / 76.5	79.5 / 80.0	76.5 / 77.0			
		Ultra-High		63.0 / 63.0	60.0 / 60.0	63.0 / 63.0	60.0 / 60.0			
Fathelau	For Cooling	High	%	63.0 / 63.0	60.0 / 60.0	63.0 / 63.0	60.0 / 60.0			
Exchange	locomig	Low		64.5 / 65.5	62.0 / 62.5	65.5 / 66.0	64.5 / 64.5			
Efficiency		Ultra-High		72.0 / 72.0	68.5 / 68.5	72.0 / 72.0	68.0 / 68.0			
(50 HZ)	For Heating	High	%	72.0 / 72.0	68.5 / 68.5	72.0 / 72.0	68.0 / 68.0			
	ricating	Low		74.0 / 75.0	72.0 / 72.5	74.0 / 75.0	71.0 / 71.5			
	Linet	Ultra-High		644-684 / 829	683-736 / 883	1,274-1,353 / 1,645	1,365-1,471 / 1,763			
	Exchange	High	w	603-612 / 712	621-656 / 763	1,207-1,225 / 1,423	1,241-1,311 / 1,526			
Power	Mode	Low	İ I	504-544 / 562	539-569 / 594	1,008-1,089 / 1,125	1,079-1,138 / 1,188			
(50 Hz)		Ultra-High		644-684 / 829	683-736 / 883	1,274-1,353 / 1,645	1,365-1,471 / 1,763			
	Bypass	High	w	603-612 / 712	621-656 / 763	1,207-1,225 / 1,423	1,241-1,311 / 1,526			
	Mode	Low	1	504-544 / 562	539-569 / 594	1,008-1,089 / 1,125	1,079-1,138 / 1,188			
	Unat	Ultra-High		41.5-42.5 / 41.0	42.0-43.0 / 42.5	43.0-44.0/ 44.0	43.5-44.0 / 44.5			
	Heat Exchange	High	dB(A)	39.5-41.0 / 37.0	40.0-41.0 / 38.0	41.0-42.5 / 39.0	41.5-43.0 / 40.0			
Sound Level	Mode	Low		36.0-38.5 / 33.0	38.0-39.5 / 34.5	38.0-40.5 / 35.0	39.0-41.0 / 36.5			
(50 Hz)		Ultra-High		41.5-42.5 / 41.0	42.0-43.0 / 42.5	43.0-44.0 / 44.0	43.5-44.0 / 44.5			
	Bypass	High	dB(A)	39.5-41.0 / 37.0	40.0-41.0 / 38.0	41.0-42.5 / 39.0	41.5-43.0 / 40.0			
	Mode	Low		36.0-38.5 / 33.0	38.0-39.5 / 34.5	38.0-40.5 / 35.0	39.0-41.0 / 36.5			
Casing					Galvanis	ed steel plate				
Insulation Mate	rial				Self-extinguishable	e polyurethane foam				
Dimensions (H	x W x D)		mm	387 x 1,0	12 x 1,110	785 x 1,0	785 x 1,012 x 1,110			
Machine Weigh	t		kg	6	3	1:	33			
Heat Exchange	System			Air to air	cross flow total heat (Sens	sible heat + latent heat) e>	change			
Heat Exchange	Element Mat	terial			Specially processed	nonflammable paper	-			
Air Filter					Multidirectional	fibrous fleeces				
	Туре				Sirocc	o fan				
		Ultra-High		800 / 800	1,000 / 1,000	1,500 / 1,500	2,000 / 2,000			
	Airflow Rate	High	m³⁄h	800 / 800	1,000 / 1,000	1,500 / 1,500	2,000 / 2,000			
_	(50 Hz)	Low	1	720 /610	880 / 835	1,350 / 1,250	1,650 / 1,580			
Fan	External	Ultra-High		210-235 / 250	205-225 / 220	195-215 / 235	190-210 / 210			
	Static	High	Ра	170-215 / 140	155-195 / 100	150-180 / 125	140-180 / 85			
	(50 Hz)	Low	1	138-174 / 81	115-150 / 70	123-146 / 88	96-123 / 53			
	Motor Out	tput	kW	0.19	0 x 2	0.19	90 x 4			
Net Supply Airfl	ow Ratio	Ultra-High	%	90	90	90	90			
		Indoor side	mm			φ250×4	φ250×4			
Connection Duc	t Diameter	meter Outdoor side		φ250	φ250	□(680×290)×2	□(680×290)×2			
Unit Ambient Co	ondition				-15℃—50℃ DB	, 80%RH or less	<u> </u>			

\* Values for electrical current, power consumption, and efficiency are at the above above-stated airflow.

\* Exchange efficiencies are values based on performance codes and air conditions that comply with JIS B8628:2017.
 \* Temperature exchange efficiency and enthalpy exchange efficiency vary according to the ratio of supply air and exhaust air and air conditions.
 \* Operation sound is an anechoic chamber conversion that complies with JISB8628:2017. When measured under actual installation conditions, the operation sound is usually greater due to ambient

noise and reverberation. \* Since the sound level of this specification is the noise level at the rated external static pressure, it will be higher on the display than the G type model as the external static pressure improves.









# **REMOTE CONTROLLER & OPTION LIST**

Standard remote controller:

- BRC1H63W/BRC1H63K

### **Optional remote controller:**

- Navigation remote controller - BRC1E63

- Simplified remote controller - BRC2E61

(Optional controller are connectable with some function limitation.)

		BRC1H63W(K)	BRC1E63	BRC2E61
Function	Detail			
Air conditioner interlock	Interlock Heat Reclaim Ventilator with air conditioner by one remote controller	•	•	•
Ventilation mode	Switch the ventilation mode (Automatic, Heat exchange, By pass)	•	•	-
Ventilation airflow rate	When using $CO_2$ sensor, ventilation volume can be changed	•	٠	•
Fresh up indication	Indicates that fresh up operation is being carried out	•	-	-
CO <sub>2</sub> indication	Indicates value of CO2 sensor	0	-	-
Outdoor temperature indication	Indicates outdoor air temperature (OA)	0	-	-
Nighttime free cooling indication	Show the night purge icon when is set	0	-	-
24 hours ventilating indication	Show the icon when is 24hrs operation is set	0	-	-
Ventilating operation indication	Indicates that ventilating operation is being carried out even when night purge operation and 24 hour ventilating operation is being carried out	•	•	-
Ventilating standby indication	Indicates that ventilating operation has been stopped temporarily during pre-cool / pre-heat control	0		-
Sharing CO <sub>2</sub> data	Share the $CO_2$ data to submit from main unit with in the group	0		-

Additional functions:

Installed functions
 Additional Installation function

### Option List:

Туре			ltem	VAM150HVE	VAM250HVE	VAM350HVE	VAM500HVE	VAM650HVE		
ے ما	Silonos				-		KDDM24B100			
tion	Silence	Nominal pipe	mm		-		φ200			
ddit unc	High ef	ficiency filter		KAF24	42J25M	KAF242J50M	KAF24	42J65M		
₹ ₽	Air filter	r for replacement		KAF24	41L25M	KAF241L35M	KAF2	41L65M		
Flexible	e duct (1	lm)		K-FDS101E	K-FI	DS151E	K-FD	S201E		
Flexible	e duct (2	2m)		K-FDS102E	K-FD	DS152E	K-FD	S202E		
CO <sub>2</sub> se	ensor			BRYC	24A25M	BRYC24A35M	BRYC24A65M			
Humid	ity senso	or		BRYH241A100 (for RA) / BRYH242A100 (for OA)						
PM2.5	filtration	ı unit		BAF249A150 BAF249A300 BAF249A350		BAF249A500 -				
PM2.5	with act	tivated carbon filtration unit		BAF249A150C	BAF249A300C	BAF249A500C	-			
Wired	remote	controller		BRC1H63W (White) / BRC1H63K (Black) / BRC1E63 / BRC2E61						
	ied ng	Residential central remote c	ontroller	DCS303A51*1						
e	alis ollii vice	Central remote controller		DCS302CA61						
evi	e ntr	Unified ON/OFF controller				DCS301BA61				
D D	ů S	Schedule Timer				DST301BA61				
Wiring adaptor for electrical appendices						KRP2A62				
E n B Installation box for adaptor						KRP1C18A90				
Ő	PC	For heater control kit		BRP4A50A						
	b D	PCB adaptor for wiring		KRP1C18						

_													
	Туре				Item	VAM800HVE	VAM1000HVE	VAM1500HVE	VAM2000HVE				
	-	01				ł	M24B100 x 2						
	one	Slience	r	Nominal pipe	mm		φ	250					
	dditi unct	High eff	iciency filter	r		ĸ	(AF242K100M	KAF24	42K100M x 2				
	μ Έ	Air filter	for replacer	ment		k	(AF241L100M	KAF24	41L100M x 2				
	Flexible	e duct (1r	n)				K-FD	S251E					
	Flexible	e duct (2r	n)				K-FD	S252E					
	CO <sub>2</sub> se	nsor				BRYC24A100M							
I	Humidity sensor						BRYH241A100 (for RA) /	BRYH242A100 (for O	A)				
1	PM2.5	filtration	unit			BAF429A20A							
1	PM2.5	with activ	vated carbo	n filtration unit		BAF429A20AC							
١	Wired r	emote c	pntroller			BRC1H63W (White) / BRC1H63K (Black) / BRC1E63 / BRC2E61							
		ng ed	Residenti	al central remote	controller	DCS303A51*1							
	e	alis ollii /ice	Central re	emote controller			DCS3	302CA61					
	evic	entr dev	Unified O	N/OFF controller			DCS3	301BA61					
	de de	ů č	Schedule	Timer			DST	301BA61					
. Wiring adaptor for electrical appe			appendices		KR	P2A62							
ା Installation box for adaptor				n box for adaptor			KRP1	C18A90					
	Cor	PC	For heater	r control kit			BRP	24A50A					
	0	0	PCB adap	otor for wiring		KBP1C18							

\* 1 For residential only. When connect with a Heat Reclaim Ventilator (VAM), you can only switch the power ON/OFF. It cannot be used with other central control equipment.

# **NEW TEST STANDARD**

# This new VAM-H is complying to latest international testing standard!

### **Revision of JIS standards**

Corresponds to the new JIS standard (JIS B8628:2017) With the establishment of the international standard (ISO 16494) for total heat exchangers (2014), the JIS standard was also revised. (December 20, 2017).

International standard for total heat exchangers was established in 2014 (ISO 16494).
Each country's standard was reviewed based on the international standard.
In Japan, JIS standards were revised to comply with international standards.

# **Stricter standards!**

If the new JIS is applied to current products, the total heat exchange efficiency and effective ventilation volume will be lower than the values indicated.

### Comparison of old and new JIS standards

Item		Old JIS	New JIS			
	Air volume	Static pressure conditions are optional.	Static pressure conditions are specified.			
Measurement method	Total heat exchange conditions Temperature and humidity conditions at the time of measurement.	DB temperature: Reference value ± 1°C WB temperature: Standard value ± 2°C	DB temperature: Reference value ± 0.3°C WB temperature: Standard value ± 0.2°C			
	Effective ventilation efficiency	Only internal leakage of the product can be measured.	Internal leakage + external leakage of the product to be measured			
Notation on specification sheet		Not applicable	Yes			

Due to stricter standards, when the new JIS is applied to current products, the total heat exchange efficiency and effective ventilation rate may be lower than the values indicated.

Revision of JIS Standards (JIS B8628:2017)

# **Air Treatment Equipment**

# Airflow rate control with CO<sub>2</sub> sensor

The CO<sub>2</sub> sensor controls airflow rate so that it best matches the changes of CO<sub>2</sub> level in the room. This prevents energy losses from over-ventilation while maintaining indoor air quality with optional CO<sub>2</sub> sensor.

• Example of CO<sub>2</sub> sensor operation in an office room:



# Automatic Ventilation Mode Swithching (Bypass control) with Humidity sensor

Suitable ventilation mode depending on condition will be switched automatically

The ventilation unit detects room temperature and outside air temperature, then automatically switches to suitable ventilation mode to provide higher energy-saving. By installing humidity sensor (optional item), the mode will be switched automatically based on the amount of heat (energy) and discomfort index to further improve energy saving and comfort. \*1





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becifications				80 Туре	Twice the Power wit	Decompo h Twin Str	sition eamer	70	Type H P	lumidif ower	ying and with Tv	Twice vin Str	the Dec eamer	omposi	tion	55	Туре	Stylish and Pc	Desi werf	gn witl ul Dec	n Hum ompo:	ificatio sition	on	
Functions				TWIN		4		<b>TW</b> STREE		4						STR	EAMER		-4	,	Vith wi	reless		
						 MC8(	 )7VM7		N	ICK7	'0ZV	M7-W	/ мо	CK70	ZVM	7-T			MC	К5	5TV	M6		
Max airflow rate					8.0m	<sup>3</sup> /min			(	White	) 7 On	1 <sup>3</sup> /m	(Bla	ack)				5	5m	3/m	in			
Applic	cable	room area				~6	2 m <sup>2</sup>					~4	8 m	2						~4	1 m	2		
							2																	
Humid	difica	tion				Twin	Stroomor					Twin	Stroom	or						Ctr				
Active	nier (	sma ion				- Twill	Streamer				•	TWITT	birean	lei						Jour	amer			
-	Dus	st collection	filter			•TAFU-H (10)	EPA filter /ears)*3	*2			•T/	AFU-H (10 )	EPA f (ears)	ilter *2				•	Electro	ostati (10	c HEF years)	PA filt *3	er *2	
Filte	Dec	odorising filt	ter			(No need	to change	)			• (No	o need	to cha	ange)					(No r	need	to ch	ange)		
	Pre	-filter			•	(3 Direction	nal suction	s)			) (3 Di	rectior	al suc	tions)					(3 Dire	ectior	nal su	ctions	)	
-		Pet mode Anti-pollen	mod	e		•																		
		Circulator r	node	)																				
ade	<b>G</b>	Moist mode	Э				•							•										
M		Econo mod	de						•							•								
	Auto fan mode			•												•								
	Haze (PM2.5) mode																							
	Ø	Sleep mod	le																					
Air Jalization		DAIKIN EY	Έ		<ul> <li>(With numerical display)</li> </ul>					(With numerical display)														
Visu	Sen	nsor lamps			Humidity / PM2.5 / Odour					Humidity / PM2.5 / Odour							Hur	nidity	/ PM	2.5/[	)ust /	Odou	r	
Ð	Î	Wireless co	ontro	l via App																				
lienc	Auto	o operation							•															
nver	Chi	la proot loci	K	o. mł											•									
රි	Сая	niness auju	usim	ent		Onti	Ontional										•							
	Odd	51613				Opti	Jilai																	
Colou	ir vr. cum				2 Tone C	olour (Front: \	Vhite, Top/Side	: Dark Grey)	White, Black								1.5	beee	Wł			1=		
Plug	shape	e				C ty	-240V, 50 /pe	пг		1	Filas	e, 220 C t	/pe	, 30 F	IZ			1 Г	nase,	Ct	-2401 /pe	, 50 1	12	
Mode	)				Quiet	Air purifying	g operatior Standard	1 Turbo	Air p Quiet	ourifyin Low	g oper Standard	ation Turbo	Hun Quiet	nidifyin Low	g oper Standard	ation Turbo	Air pi Quiet	urifyin Low	g oper Standard	ation Turbo	Hum Quiet	idifyin Low	g opera	ation Turbo
Airflov	w rate	e		m³/min.	1.4	2.2	3.5	8.0	1.4	2.2	3.5	7.0	1.4	2.2	3.5	7.0	0.9	2.0	3.2	5.5	1.7	2.4	3.2	5.5
Powe	er con	sumption		W	9	11	16	80	10	11	20	82	10	12	23	84	7	10	17	56	11	14	19	58
Sound	d pre	ssure level		dB ml /h	19	25	34	55	18	27	37	54	18	27	37	54 700	19	29	39	53	25	33	39	53
Humidification ** mL/h Dimensions mm					H630 × W3	315 × D315	5			H76	0 × W3	315 ×	D315		100				< W2	200) 270 ×	D270	(000)	500	
Weight kg					9.	8				12.5	(With	nout w	ater)					9.5 (\	Nith	out wa	ter)			
Humidifying method								7	700 ml	L/h, E	vapor	ation t	ype E	lemen	nt	50	0mL/	h, Eva	ipora	ation t	ype E	lemer	nt	
Tank capacity Dust collection				(Purchase of	BAFT501A new filter is nee	A (1 piece) eded after abo	ut 10 years) *3	(Purc	H chase of	BAF new fil	T501/ T501/	About A (1 pi eded aft	3.4 L ece) er abou	t 10 yea	ars) *3	(Purch	Hi nase of	BAFP	ying 500/ r is ne	Abou A (1 pi eded af	it 2.7 ece) er abou	L It 10 yea	ers) "3	
Optiona	al	Replacement		odorising																			,	
accesso	ories	inter	Hu	midifying					(Pur	chase o	KNMI f new fi	=108A Iters is n	4E (1 eeded a	piece) ifter abo	out 10 ye	ears)	K Purch	NME nase of	:080A	4E (* rs is n	eeded a	f 2 pi fter abo	eces) out 10 ye	ars)
		0	Gir	1-ION											(=									
Casters						KKS08	30B41								(Equ	ipped	in the	e unit	)					



Note: \*1 Calculated by test method based on Japan Electrical Manufacturers' Association Standard JEM1467.

\*2 Test method based on Japan Electrical Manufacturers' Association Standard JEM1467.

 $^{\star_3}$  Verified by test method based on JEM1467. The standard assumes five cigarettes are smoked per day.

Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed.

Filter lifespan may vary depending on the operating conditions.

\*4 Humidifying capacity by JEM1426 (electric humidifier) at temperature of 20°C and humidity of 30%. The values in parentheses are for reference purposes only. \*5 When water is supplied from above. In the case of tank water supply, it will be 2.5L in consideration of the portability of the water tank.

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About the dust collection and deodorising capacity of air purifiers: •Not all harmful substances in cigarette smoke (carbon monoxide, etc.) can be removed.

• Not all odour components that emanate continuously (building material odours and pet odours, etc.) can be removed.

This product is not a medical device, medical treatment device or a therapeutic good. This product is not intended to have any therapeutic use or to be used for the diagnosis, treatment, relief or prevention of illness. If you have a health concern or are not feeling well, please consult a health care professional.

e Co Po	mpact Design werful Decom	and position	30 Type Coloured-style Design with Effective Suction						
R	C30YVM	7	MCQ30ZVM7-H (Grey)						
3.	.0m³/mir	۱.		3.0m³/min	)_				
	$\sim$ 23 m <sup>2</sup>			$\sim$ 23 m <sup>2</sup>					
Elect	●Streamer trostatic HEP/ (10 years)*:	A filter *2	● Ele	ctrostatic HEPA (10 years)*3	filter *2				
(No	need to chan	ge)		Optional					
	•			•					
hase	White e, 220-240V, 9 C type	50 Hz	2 Tone Color 1 Pha	ur (Front: White, Operatio use, 220-240V, 5 C type	n display: Grey) 50 Hz				
Air p	Unitying opera	Turbo	Air	purifying operat	Turbo				
	2.0	3.0	1.0	2.0	3.0				
	15	25	9	16	25				
	27	37	19	27	37				
				-					
H45(	5.8	270	H4	5.8 5.8	270				
			5.8						
BAF	P500A (1 pie	ce)	BAFP500A (1 piece)						
new fi	Iter is needed after	about 10 years) 3	(Purchase of new B) (Purchase of n	about 10 years) 3 e) about 1 year)					
			BAFG5 (Purchase of n	03A (1 set of 3 p new filter is needed	vieces) about 1 year)				