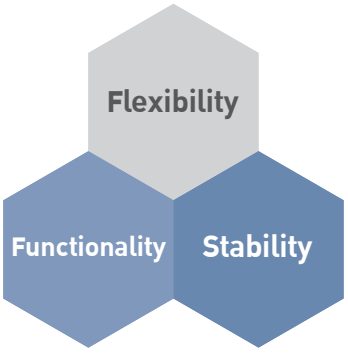
Air Treatment Equipment

New Streamer Duct Chamber

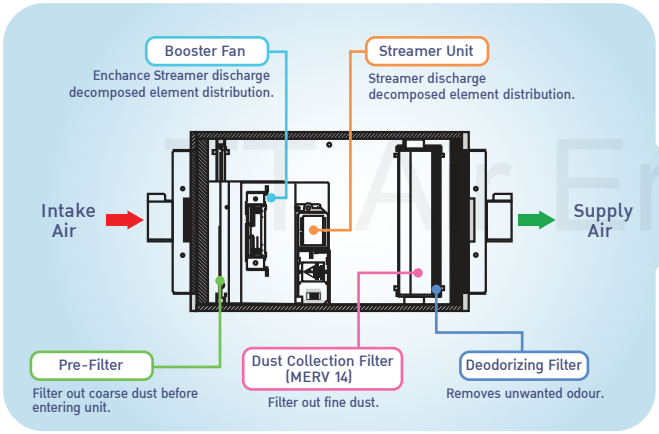
Flexibility, Stability, Functionality

- Multiple combination of ducting unit.
- Dust collection filter (MERV 14) catch bacteria and viruses and prevents them from entering the room.
- Streamer technology to decompose harmful substances which caught by the filter.

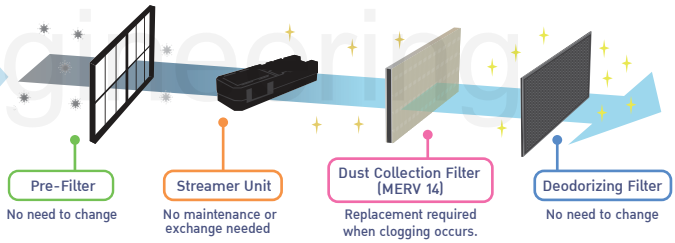


Streamer Duct Chamber Movie

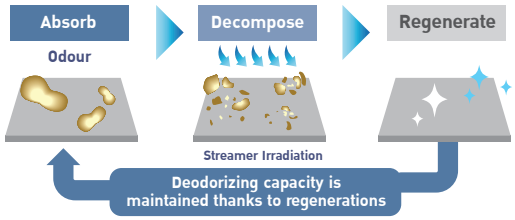
Filters Location



Filters Mechanism

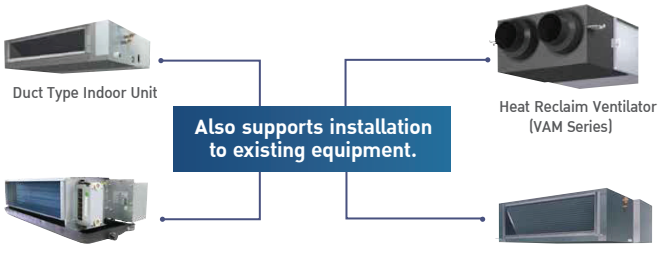


Deodorizing Filter



No need to change deodorizing filters!

Connectable Air Conditioning



CAUTION!

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

Model	Airflow range (CMH)
BDEZ500A60VE	80-600
BDEZ500A140VE	500-1400
BDEZ500A510VE	1200-5100
Operating Condition	-10˚ to 50˚C Max. 80%RH

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

1.Place subjected to high temperature or direct flame. Overheat orfire may 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, arehandled. 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.

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 assmall as PM2.5 with Dust Collection Filter (MERV 14) ratings in accordance to ASHRAE 52.2 Standards.

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.

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)	Range 3 (3.0-10.0)
14	75%	90%	95%

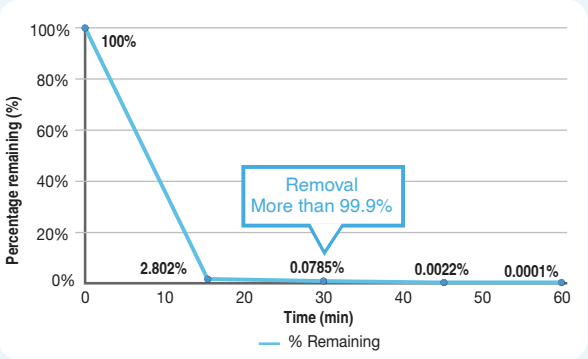
Dust Collection Filter (MERV 14) Replacement Period

Air Quality Condition	Dust concentration (µg/m³)		Replacement period
	PM2.5	PM10	
Case 1	18.5	28.5	12 months
Case 2	35	65	6 months

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.

Test Result for Streamer Duct Chamber

JEM1467 Appendix D: Airborne Bacteria Removal Performance



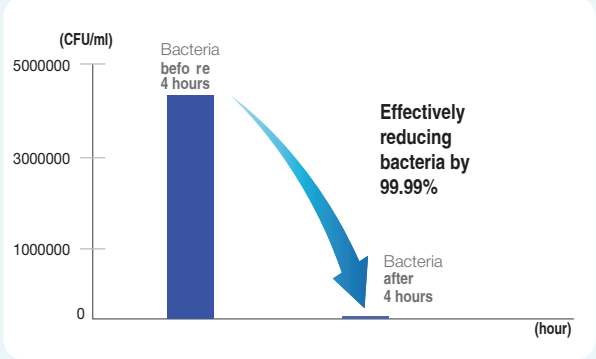
Test Organisation:
Tropical Infectious Diseases Research & Education Centre (TIDREC), Universiti Malaya

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.

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

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.

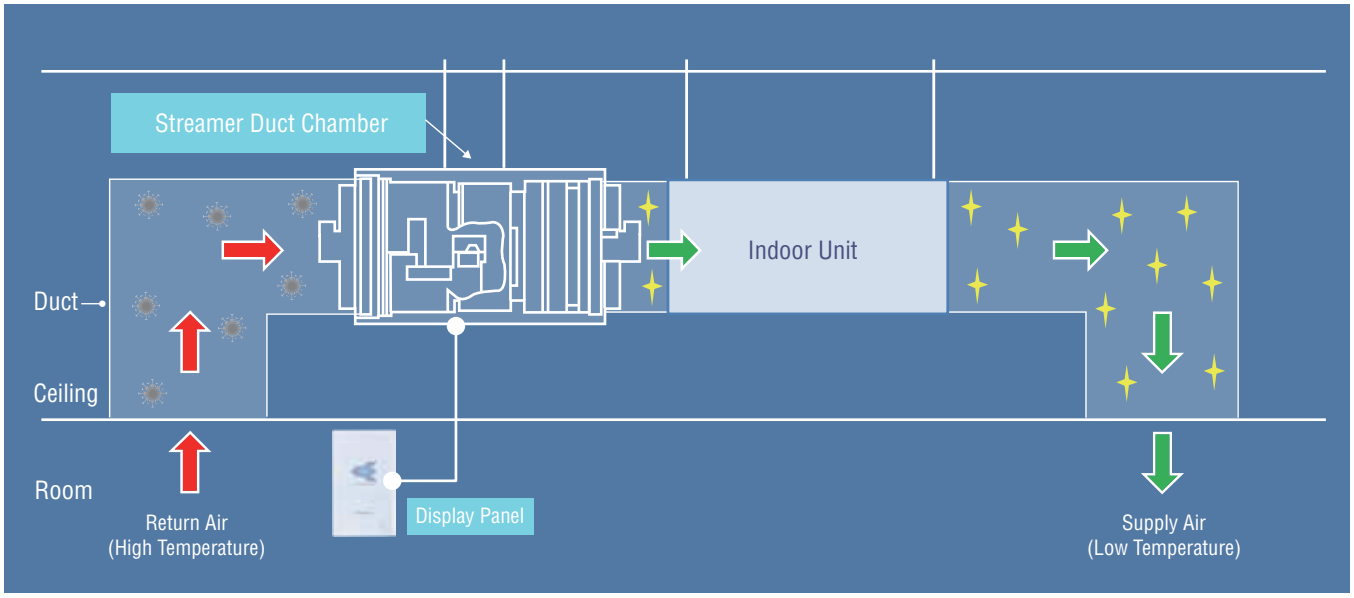
Test Result:
Streamer Duct Chamber (BDEZ500A60VE) was able to inactivate bacteria by 99.99% on MERV14 filter after exposure of 4 hours.

Test Report from Universiti Malaya (Malaysia)

An efficacy of 99.9% reduction of Escherichia coli ATCC 8739 in 4 hr. in a 31.2 m³ area.

Air Treatment Equipment

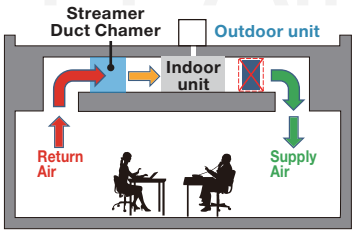
Streamer Duct Chamber



Installation Conditions

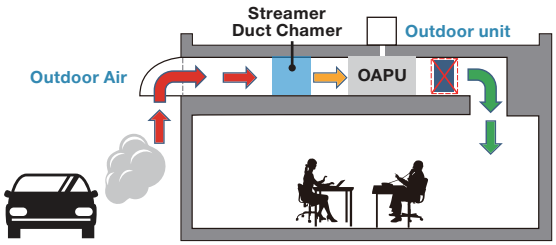
Duct Type Indoor Unit

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.



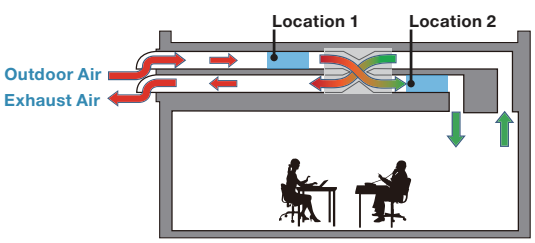
Outdoor Air Processing Unit

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 recmmended 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.

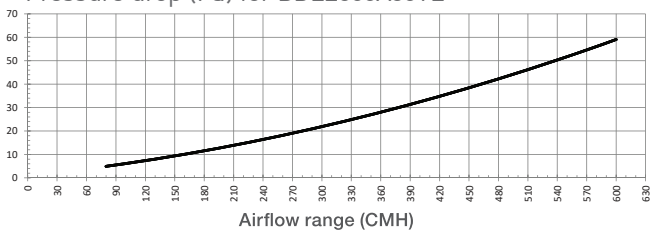
(1) Select an installation site where the following conditions are fullfilled
- Location with sufficient strength and stability (beams, ceilling, and other locations capable of fully supporting the weight of the unit). Insufficient strength may result in the unit falling over and causing injury. It may also cause vibration and unusual noise.
- Where nothing blocks are passage.
- Where the Unit is not in direct contact wit 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.
- 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.

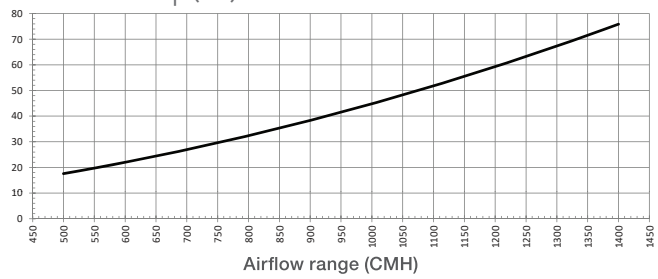
Pressure Drop Chart

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.

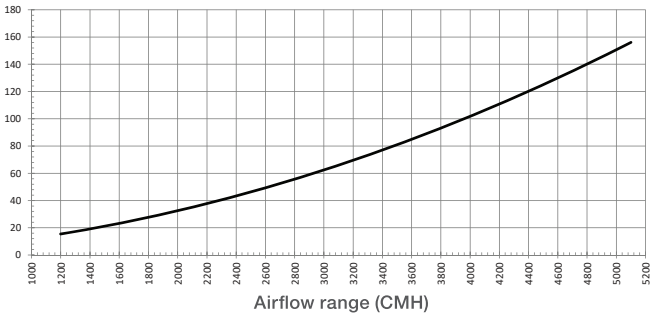
Pressure drop (Pa) for BDEZ500A60VE



Pressure drop (Pa) for BDEZ500A140VE



Pressure drop (Pa) for BDEZ500A510VE



Display panel

Stylish outlook, without affecting the building interior design

Streamer Off | Streamer On | 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.
- **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.

Specification

Model Name		BDEZ500A60VE	BDEZ500A140VE	BDEZ500A510VE
Outlook				
Power Supply		1 phase 220-240V/220V 50/60Hz		
Casing Dimension	H (mm)	269	269	318
	W (mm)	419	819	1419
	D (mm)	418	418	653
Operating Temperature	°C	-10 to 50		
Operating Humidity	%	Max. 80%RH		
Airflow	CMH	80 - 600	500 - 1400	1200 - 5100
Initial Pressure Drop	Pa	5 – 59	18 - 76	16 - 156
Dust Collection Filter (MERV 14) Lifespan	Months (based on median CMH)	12	12	12
Weight	kg	13	19	38
Power Consumption	W	6.0	8.5	11.0
Sound Pressure Level		No increase in Sound Pressure Level as overall system		
Filters Quantity	Pre-Filter	1	2	4
	Dust Collection Filter (MERV 14)	1	2	4
	Deodorizing Filter	1	2	4
Replacement Filter Dust Collection Filter (MERV 14)		BAFH500A60 (1pc)	BAFH500A140 (2pcs)	BAFH500A510 (4pcs)
Dimension H*W*D (mm)		221 x 392 x 50 (referring to 1pc only)		450 x 343 x 50 (referring to 1pc only)
Working Method		DP sensor		