

IAQ

Indoor Air Quality

ERV

Thermo Ventilator

Ventilation Fan

Accessories

Comfortable **ventilation solution** for people and air
Himpel is heading to the world.

Himpel, a **ventilation specialized company** established in
1989, is **realizing** a pleasant and healthy **ventilation culture**.

1989 Established Jindo Precision Chemicals Co., Ltd.	1997 Selected as a promising small entity (in GyeongGi-Do)	1999 Acquired KS (Korea Industrial Standards) mark (ventilation fan)	2000 Changed the company name to Jindo Living Tech Co., Ltd.
2003 Acquired ISO 9001	2005 Approved Lab affiliated with company (No. 051108)	2006 Certificated as INNO BIZ company (R6061-0049) by the Small and Medium Business Administration of Korea	2008 Received the small and Medium Business Administration Award
2009 - Received the Small and Medium Business Award for Technology Innovation - Selected as GOOD DESIGN (ventilation fan) - Received the Minister of Knowledge and Economy prize	2010 - Changed the company name to HIMPEL Co., Ltd. - Acquired European Electrical Appliances Safety Certification CE	2011 Selected as a Top 500 HT Product of Small and Medium Business	2012 - Won the Prime Minister's commendation as a small business contributor (in manufacturing division) - Acquired KS (Korea Industrial Standards) mark (Heat recovery ventilation system)
2014 - Won the President of Korea Consulting as Company Renovation (the Korea Chamber of Commerce & Industry) - Selected as Small Hidden Champion (Ministry of Employment and Labor)	2015 - Acquired Indonesian safety certification SNI - Received a commendation from the Minister of Trade, Industry and Energy in the leadership section of the National Productivity Competition - Selected as Excellent Job Company(GyeongGi-Do)	2016 - Received the National Brand Promotion Agency Award for Best Reading Management Workplace - Received a commendation from the Minister of Trade, Industry and Energy as Company Renovation	2017 - Delivered and completed the heat recovery ventilation system for the first zero energy house demonstration complex in Korea - Selected as an excellent female employment company
2018 - HUEZENTTE selected as Good Design - Acquired China electrical product safety certification CCC - Received a commendation from the Ministry of Gender Equality and Family for employment support business for women with career interruption	2019 - Awarded as an exemplary taxpayer from the Ministry of Strategy and Finance - Received the Presidential Citation for the 40th anniversary of Korea Industrial Technology - Received the 1 Million Dollar Export Tower award - Completed the Zero Energy plant (first in Korea)	2020 Awarded by Korea Facility Technology Association	2021 - Awarded 1st in Korea customer satisfaction index - Received HUEVEN S New Product (NEP) Certification - Received presidential citation at Korea Green Management Awards - Received citation from the minister of employment and labor for youth job creation
2022 Acquired ISO 45001			

Himpel's mission is "Contributing to human health through air and energy technology."

In 2003, we were the first in the industry to obtain ISO9001 certification, which is certified by UKAS in the UK. The excellence of our technology and quality is being recognized worldwide through the KS certification of the Korea Standards Association, the constant air volume certification of the Korea Facility Technology Association, and the international standards CE, PSE, SNI, and CCC certification.

We have established a wide range of delivery records and the best professional network covering excellent domestic construction companies. Specialized products and sincere services are the best benefits that only Himpel customers can enjoy.

We will continue to provide and realize a pleasant and healthy ventilation culture with eco-friendly, high-quality ventilation specialty products in the future,

Sincerely yours, President **Jeong-Hwan Kim**

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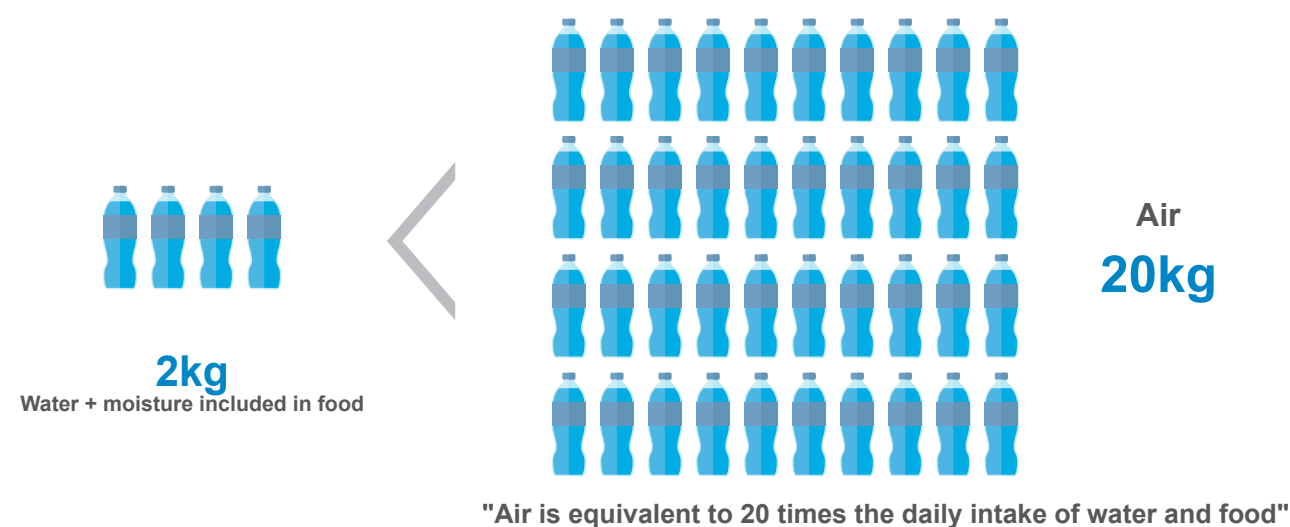


You close the window because of fine dust.
Is the indoor air you breathe safe?

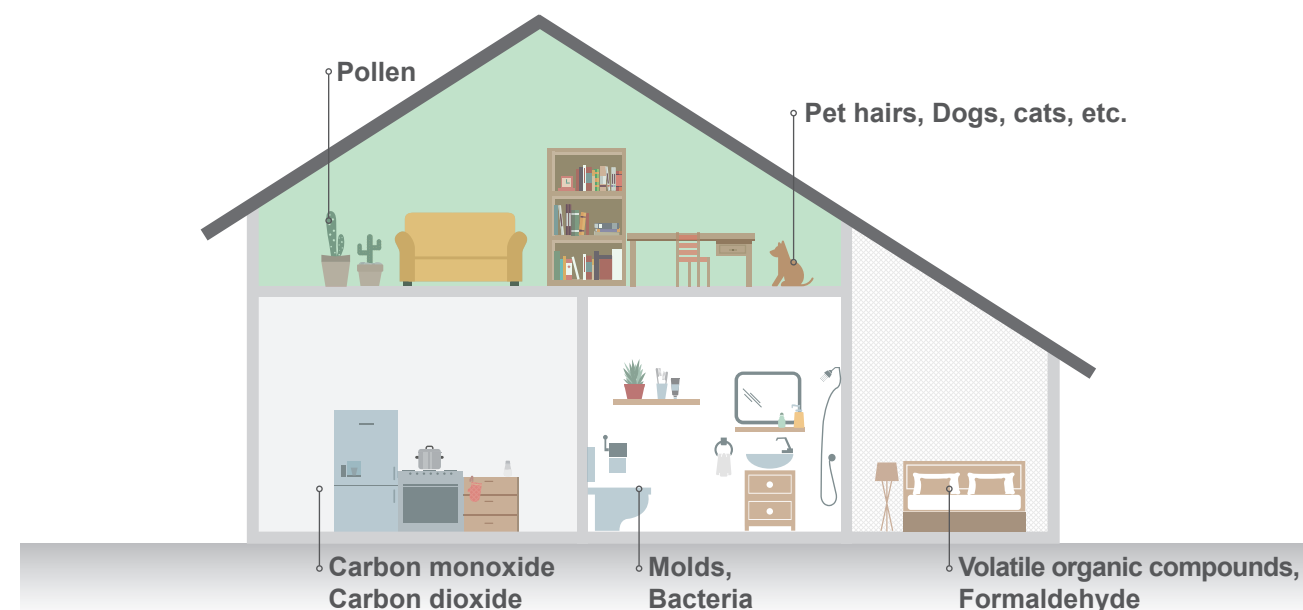
Modern men spend over 90% of the day indoors. Indoor pollutants are 1,000 times more likely to be transmitted to human lungs than outdoor pollutants. Of the 7 million air pollution-related deaths (in 2012), 61% or 4.3 million deaths are attributed to 'indoor air' pollution, resulting in heart disease, stroke, and lung disease.

What is the amount of air you breathe in a day?

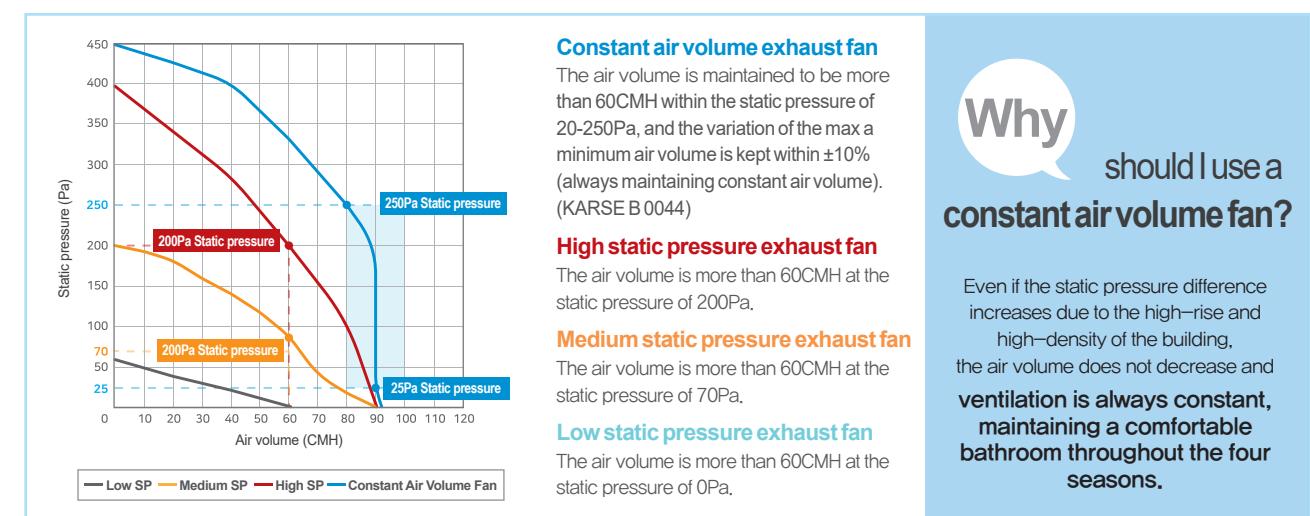
(Based on daily consumption amount per person)



What are the causes of indoor pollution in the house?



Indoor air to breathe
Turn it into a Himpel ventilation appliance!

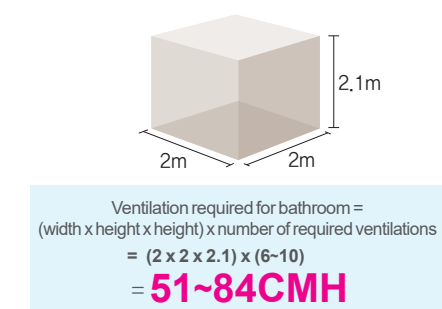


Calculation of ventilation volume by area

Required number of ventilations

Division	Number of times (per hour)
Bathroom	6 to 10 times
Bathroom	2 to 4 times
Living room	4 to 6 times
Kitchen	10 to 20 times
Hall/Stairway	4 to 6 times
Utility room (Storage)	15 to 20 times

Dimensions of bathroom space



* Ventilation per room is based on the number of natural ventilations

* The above calculation method was created to help you select a ventilation fan, and there may be differences in performance and experience due to external influences (installation location, duct length, duct bending degree, etc.) in actual use.

Recommended ventilation fans by housing type

Housing type	Category	Recommended product
Apartment (Shared housing)	High rise (15th to 20th floors and above)	ZEROC
	Middle floor (Floors 10-15)	Flrex / ZEROC
	Low floor (1~10 floors)	TURBO 747 / Flrex / ZEROC
Villa	5th floor and below	Flrex / ZEROC
Single	1st~2nd floor	Flrex / ZEROC

* Based on the highest number of floors

* Product specifications may differ depending on the installation and construction conditions.

How is HIMPEL ERV different from the air purifier?

Category	ERV	Air purifier
Installation space	Living room, regular room, utility room, outdoor unit room, balcony, veranda and others	living room, regular room
Clean space	Clean the entire household (within 2 hours with one equipment)	Clean only the layout space (requires products for each room)
Air volume	100 ~ 250 (Possible to set the desired air volume)	Not disclosed by the manufacturer (Cannot be set)
Noise	40dB or less	40-60dB
Filter	pre-filter, medium filter, HEPA filter	Pre-filter, Carbon filter, HEPA filter
Space restriction	None	Occupation of installation space and restriction of surrounding space
Advantages and Disadvantages	Removal of harmful gas and supply of oxygen	Cannot remove harmful gas and supply of oxygen

Hueven S

NEP(New Excellent Product) Certification / Pin-Up Design Award

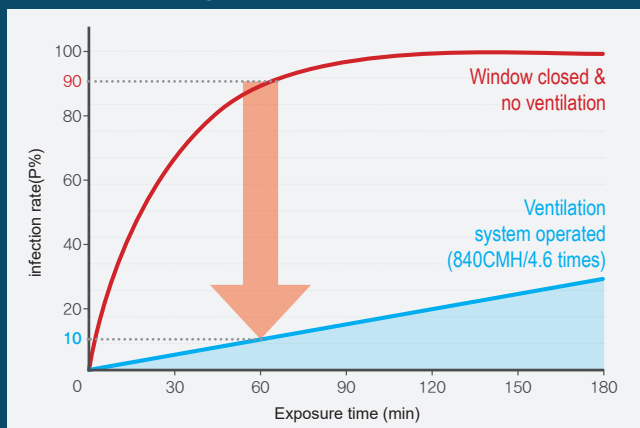
Korea's first stand type ventilation system (ERV)

- NEP (New excellent product) is a certification that evaluates technicality, product performance, and quality of products to which new technologies developed for the first time in Korea are applied by the Ministry of Trade, Industry and Energy(MOTIE).
- The Pin-up design was awarded in recognition of the excellence of design value in a contest hosted by the KAID(Korea Association of Industrial Designers).



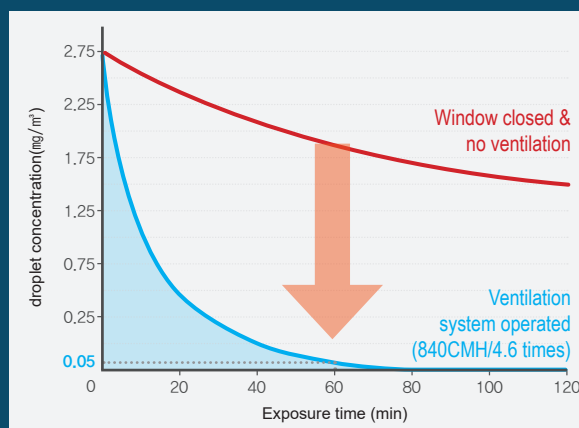
Reduction of virus infection rate and droplet removal effect when mechanical ventilation is used

1. Effect of reducing virus infection rate



90% reduction of infection rate

2. Virus droplet removal effect



98% reduction of droplet concentration

- Laboratory : 181m³, initial droplet concentration : 2.7mg/m³ / Cooling conditions: Indoor temperature (RA) 20.1℃, Outdoor temperature (OA) 29.6℃ (based on 2 HRD2-400EGS units)
- Reference thesis : Estimation of airborne viral emission: Quanta emission rate of SARS-CoV-2 for infection risk assessment, Department of Civil and Mechanical Engineering, University of Cassino (Italy), Queensland Institute of Technology (Australia), 2020

Huezentte 2

Awarded IR52 (Jang Young-sil Award) / Good Design Award

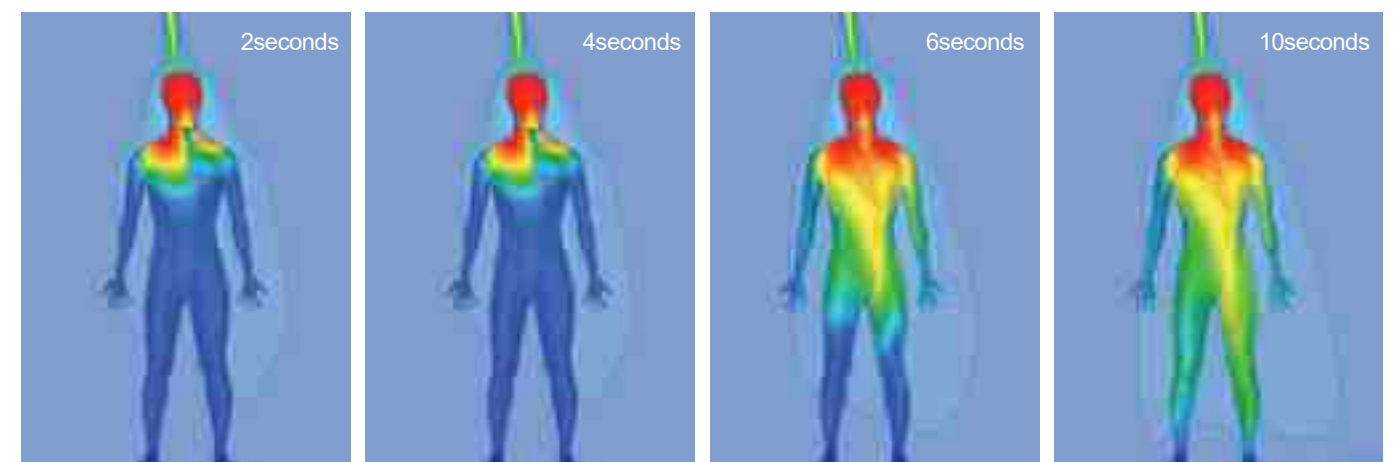
Korea's first thermo ventilator

* Jang Young-sil is a famous Korean inventor. He is famous enough to be called the Thomas Edison of Korea.

- The IR52 is awarded by selecting and rewarding the research performance of companies hosted by the Ministry of Trade, Industry and Energy(MOTIE), as well as excellent new technology products and technological innovation achievements.
- The Good Design (GD) award is awarded by selecting an outstanding design from the Ministry of Trade, Industry and Energy.



From head to toe in 10 seconds! Huezentte Hair & Body dry effect

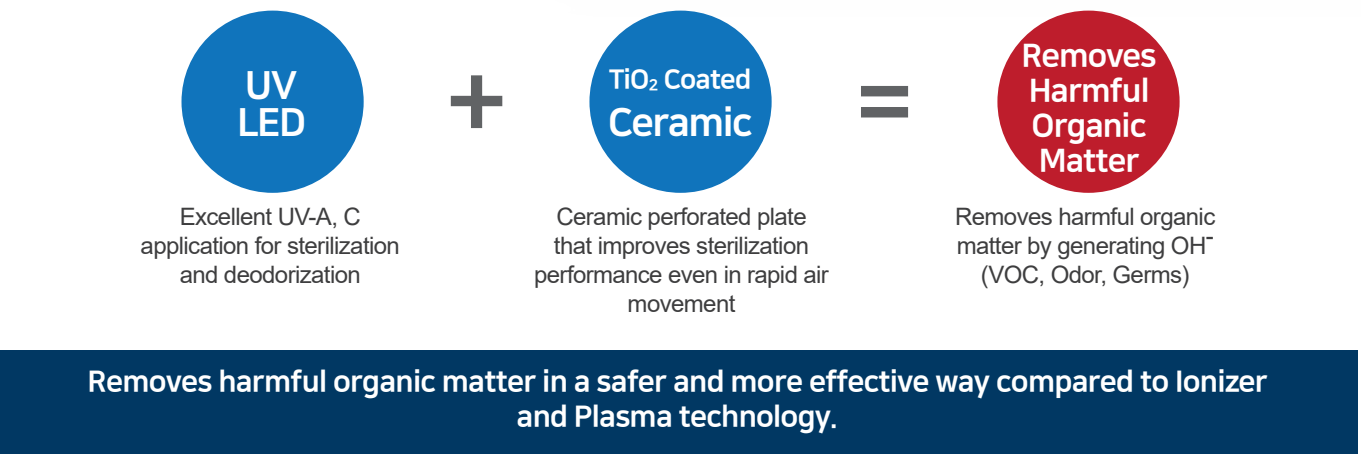


- Bathroom height: 2.1M / Adult height: 170cm / Huezentte dry 190CMH-(strong)

UV sterilization

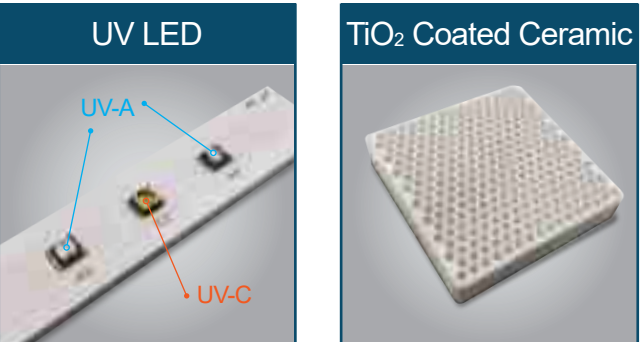
Removes even viruses and bacteria!

It is an anti-virus ventilation system with anti-virus sterilization technology for safe ventilation.



Anti-virus sterilization

By applying UV-A and C, stronger sterilization and deodorization functions by TiO₂ coated ceramic photocatalysis are added to provide cleaner air.



Type	Air sterilizer standard	Test result
Airborne bacteria reduction rate	More than 80% removed	99.0% removed
Airborne virus reduction rate	More than 60% removed	95.6% removed
Toluene	More than 70% deodorization	99.9% deodorization
Acetic acid	More than 70% deodorization	98.0% deodorization
Ammonia	More than 70% deodorization	95.8% deodorization
Acetaldehyde	More than 70% deodorization	92.0% deodorization
Formaldehyde	More than 70% deodorization	87.9% deodorization
Ozone production (PPM)	0.05 or less	0.003

※ Based on air sterilizer KOUVAAS 02:2019 / Test result of Korea Testing Laboratory
※ Test model: HRD-EP150IBC

Huezentte 3

Bathroom ventilation appliances that meet consumer needs

Creates a differentiated space with various optional functions that make the bathroom a comfortable healing space.



“HUEZENTTE3, a bathroom ventilation appliance that creates a differentiated space according to consumer needs”

ZEROC P Design The Ventilation System

Patent registration completed

We provide customized solutions for a comfortable and clean bathroom space 24 hours a day, 365 days a year.

Released in the second half of 2020



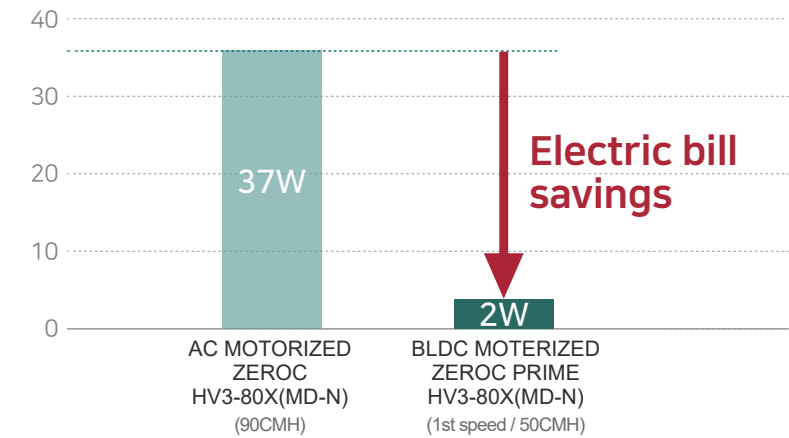
[Remote control]

Lowest
2W
Power Consumption
(1st speed)

- Lowest 2W ultra-low power consumption (1st speed)
- 160CMH turbo (10th speed), which is twice as high as a general fan
- Low-noise ventilator quieter than a library-25dB (1st speed)
- Automatic humidity operation and humidity display for customer convenience
- Wireless remote control that can adjust the air volume according to the situation
- World's first 10-stage airflow control
- Triple ventilation system (optional)

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

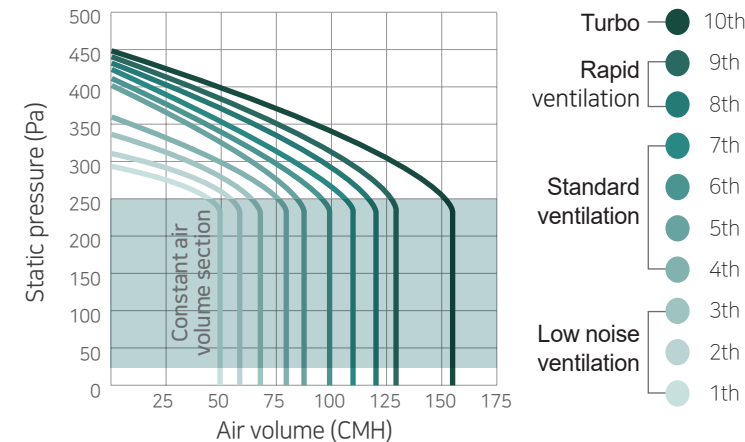
94.5% reduction in power consumption and energy



* Electric consumption when using 24 hours for 30 days
* There may be a difference in rates depending on the high-voltage and low-voltage housing.

The world's first 10-speed control constant air volume fan

This is a ventilator with a new concept that can control the air volume according to the bathroom environment from 50 to 160 air volumes.

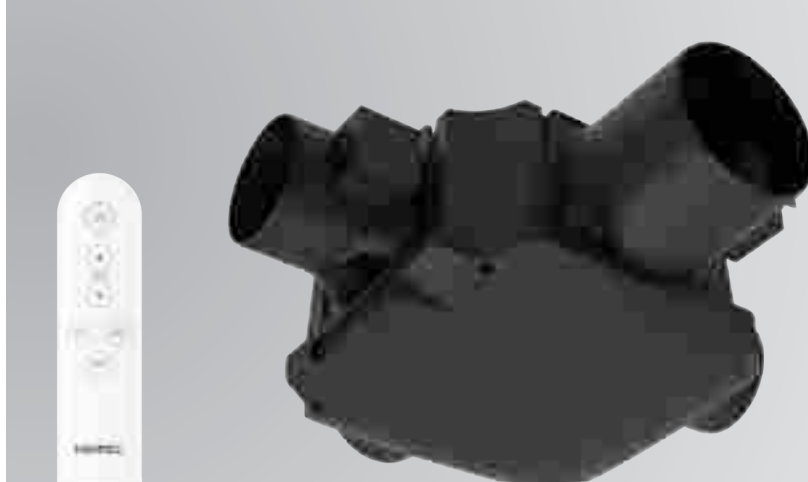


LIVO P Add Ventilation to Ventilation

Patent pending

Customized ventilation solution expandable up to 3 branches in a ceiling-mounted body.

Released in the second half of 2020



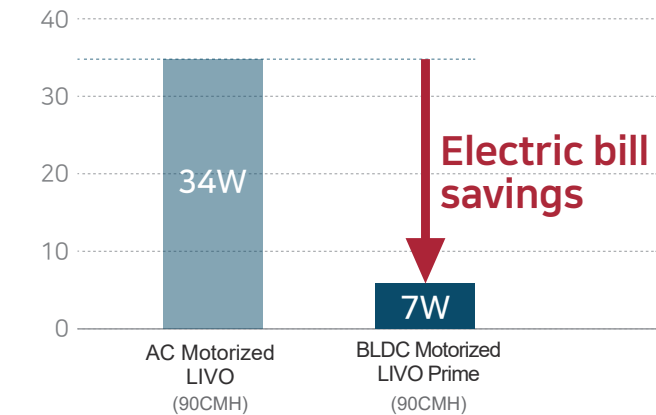
[Remote control]

Low noise,
Low Power
BLDC
LIVO Prime

- Highly convenient to install as a slim product with a height of 150mm
- Noise Down, Efficiency Up-31dB (90CMH based on 2 branches)
- Automatic humidity operation for customer convenience
- Wireless remote control that can adjust the air volume according to the situation

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

81% Reduction in power consumption and energy



* Electric consumption when using 24 hours for 30 days
* There may be a difference in rates depending on the high-voltage and low-voltage housing.

Realizing the low noise constant air volume		
Constant air volume	Single room (1 branch)	Two-room (2 branches)
70CMH	30dB	28dB
90CMH	37dB	31dB
120CMH	45dB	40dB

Compact expandable ventilation appliance



Easy to install



Energy saving



Expandable ventilation system

A new change to the existing bathroom fan
Compact expandable ventilation appliance

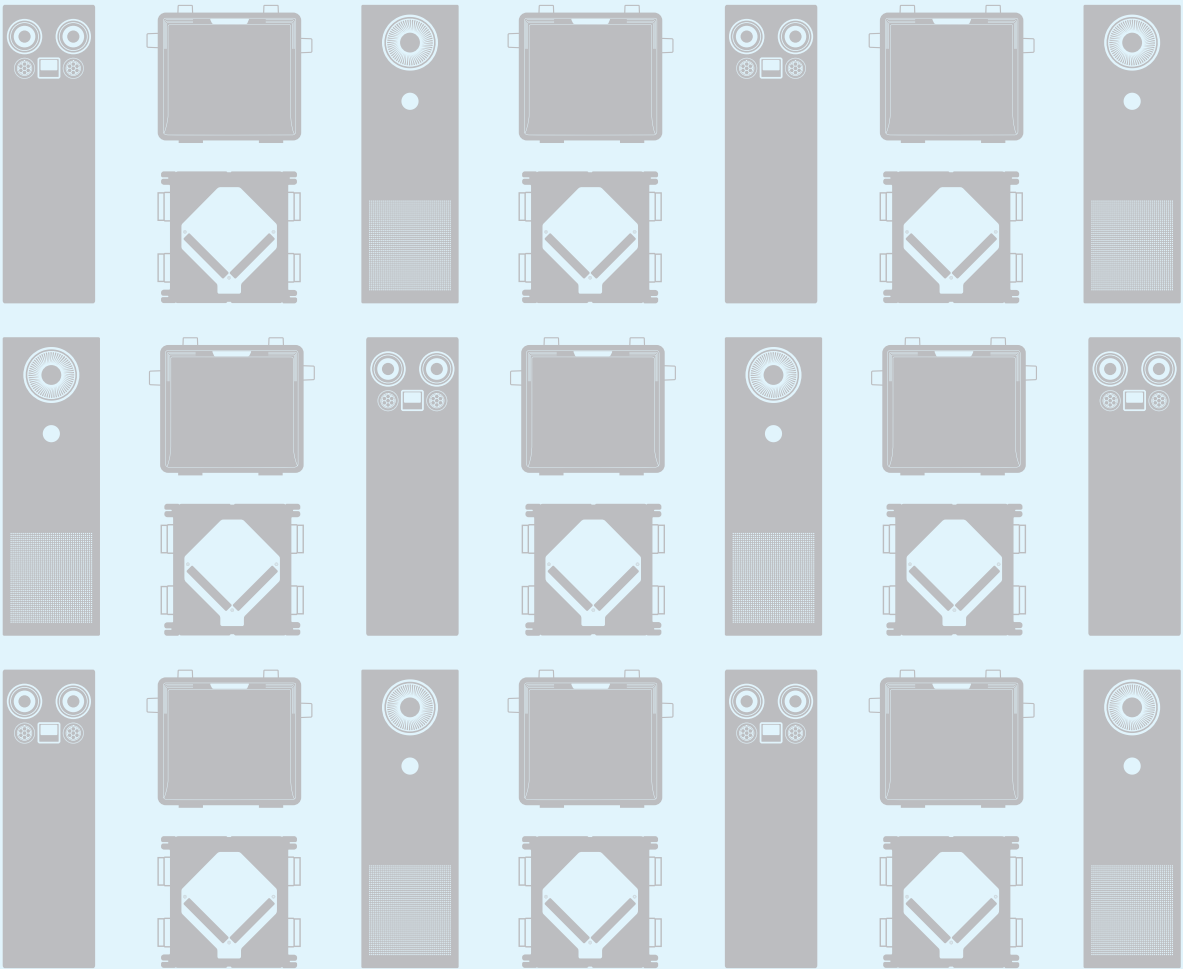
- Luxurious design that enhances installation convenience with a slim product
- Noise Down, Efficiency Up- Ventilation appliance with low noise and low power
- Reflecting customer convenience-Automatic operation of humidity and humidity display

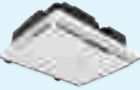
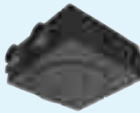
LIVO Prime all over my house!
Multiple expansion branches available

- Smells and moisture from several places such as shoe cabinets and dressing rooms at once!
- Three types of ventilation are possible for a comfortable living space
- A high airtight motorized damper is applied as a standard, ensuring even headwinds!

ERV

A device that discharges contaminated air from the inside to the outside for healthy indoor air quality and puts fresh air from outside into the room
There are ERV, air supply systems, exhaust systems, hybrid ventilation systems, and 3-stage control systems and others.



	HUEVEN C 1 (Ceiling-Mounted Type) HRD-50C(SM), HRD-70C(SM)	15
	HUEVEN C 2 (Ceiling-Mounted Type) HRD-100C, HRD-100C(DS)	17
	HUEVEN A (Suspended Type) HRD1-50PLI_BC, HRD1-100PLI_BC	19
	HUEVEN E (Suspended Type) HRD-EP150I(DS), HRD-EP200I(DS), HRD-EP250I(DS)	20
	HUEVEN EBSN (Slim, Suspended Type) HRD-EP50IBSN, HRD-EP100IBSN, HRD-EP150IBSN	21
	HUEVEN EBN (Suspended Type) HRD-EP100IBN, HRD-EP150IBN, HRD-EP200IBN, HRD-EP250IBN	22
	HUEVEN EF 1 (Suspended Type) HRD-EP150IBC, HRD-EP200IBC, HRD-EP250IBC	23
	HUEVEN EF 2 (Slim, Suspended Type) HRD-EP100IBC, HRD-EP150IBCN	24
	HUEVEN EGI (Small) HRE-S150, HRE-S250(D), HRE-350(D)	25
	HUEVEN EGI (Medium, Large) HRD1-350EGI, HRE-500(D), HRE-800(D), HRE-1000(D)	26
	HUEVEN S (Stand Type) HRD2-400EGS, HRD2-400EGS_U	27
	HUEVEN S (Stand Type) HRD2-1000EGS	28

Hueven C 1 (Ceiling-Mounted Type)



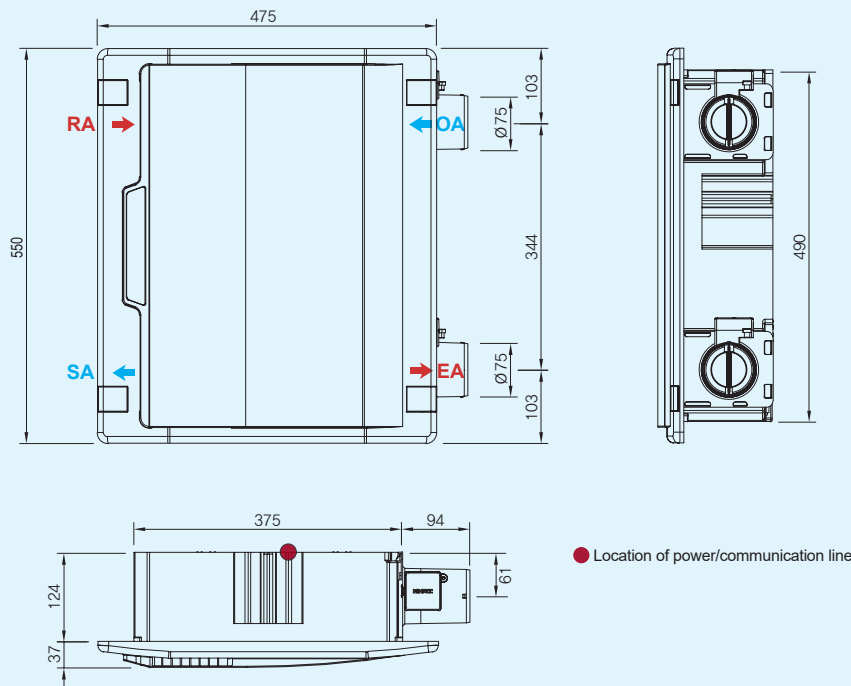
HRD-50C(SM)
HRD-70C(SM)

Housing dimension	500 X 390mm (±5mm)
Duct diameter	Outdoor : EA·OA: Ø75

- BLDC Fan-Motor (High efficiency/Low noise)
- Minimization of energy loss thanks to ERV
- High-efficiency cross-flow type enthalpy recovery element
- 3 levels of air volume control(High/medium/low)
- Automatic ventilation / timer / filter check notification
- Air pollutant removal, dust, soot, yellow dust prevention
- HEPA filter



Product dimensions (unit: mm)



Controller

Remote control

Bar Type

LCD Type (Optional)

Wired control

H Type

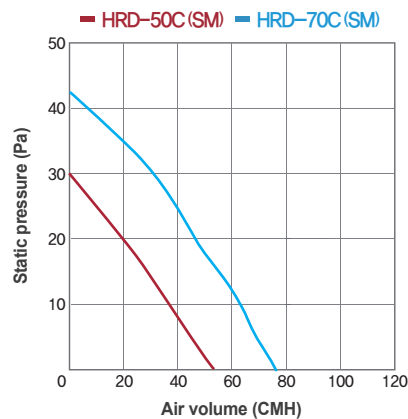
J Type

Wired control (CO₂ + PM sensor)

HUEVENCO1(Optional)

HUEVENCO2(Optional)

Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	HRD-50C(SM)			HRD-70C(SM)		
Power	1Ø X 220V X 60Hz					
Mode	High	Medium	Low	High	Medium	Low
Air volume (CMH)	60	50	40	80	70	60
Power consumption (W)	16	14	11	28	24	16
Noise (dB)	Below 40			Below 40		
Filter	Pre + HEPA					
Enthalpy recovery efficiency (%)	72 for heating, 60 for cooling			74 for heating, 69 for cooling		
Product dimension (mm)	Product body 490(W)X375(D)X124(H), Grille cover 550(W)X475(D)X37(H)					
Weight (kg)	7					
Option	Wired control , RS485 communication, Home network linkage					



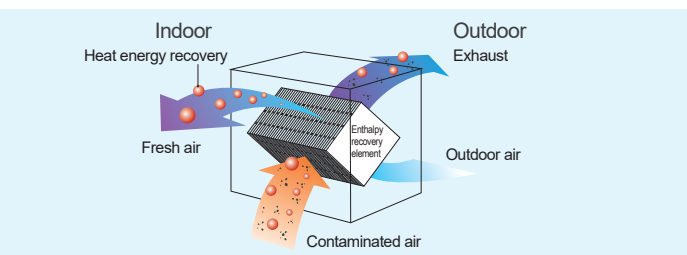
Korea's first
Ceiling-mounted
type

ERV HUEVEN C

ERV for a pleasant indoor environment

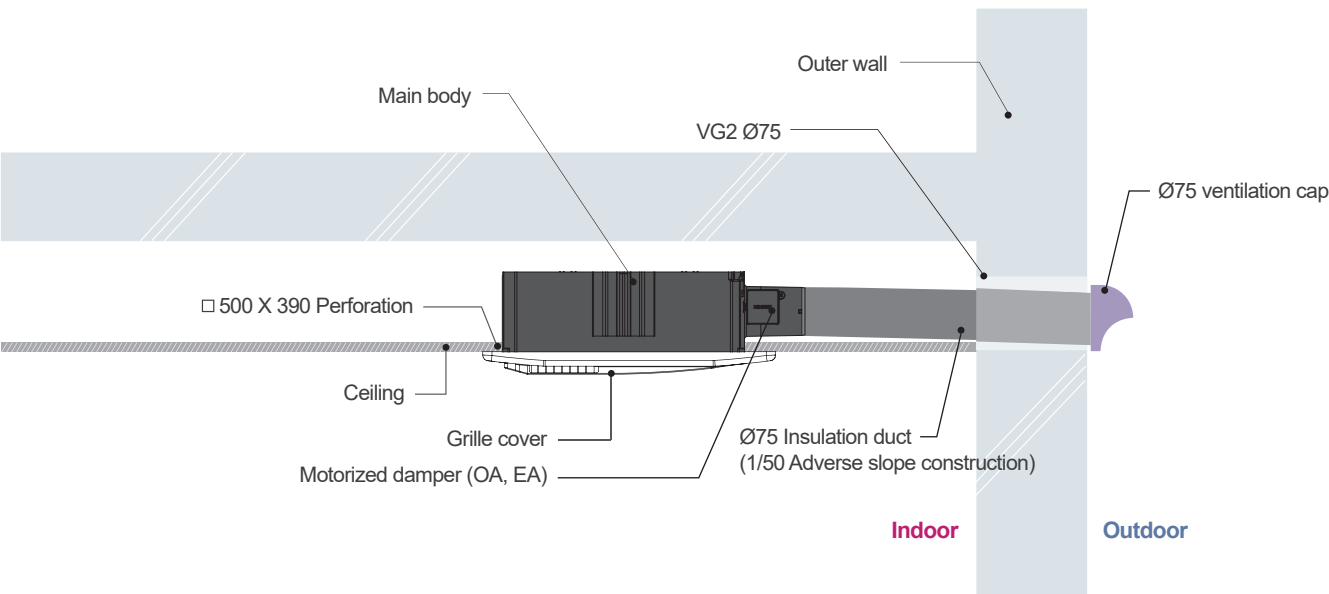
- Korea's first ceiling-mounted type ERV
- As each room can be controlled, only the necessary room can be operated, reducing unnecessary operating costs.
- In cold weather, when the indoor air supply (SA) temperature decreases, the air supply temperature is sensed to control the air supply and exhaust air volume. (Severe cold season operation mode)
- Condensation and inflow of outside air are prevented by applying an motorized damper (M.D) on the outside (OA)/exhaust (EA) side.
- The product height is 124mm, so there are few restrictions on installation.

Minimization of energy loss thanks to ERV



- When exhausting, heat energy is discharged to the outside along with contaminated air, and when supplying air, heat energy is recovered and fresh air is supplied to the room. By reducing the indoor cooling and heating load caused by ventilation, the cost for cooling and heating is reduced.

Ceiling-mounted type ERV installation details



Hueven C 2 (Ceiling-Mounted Type)

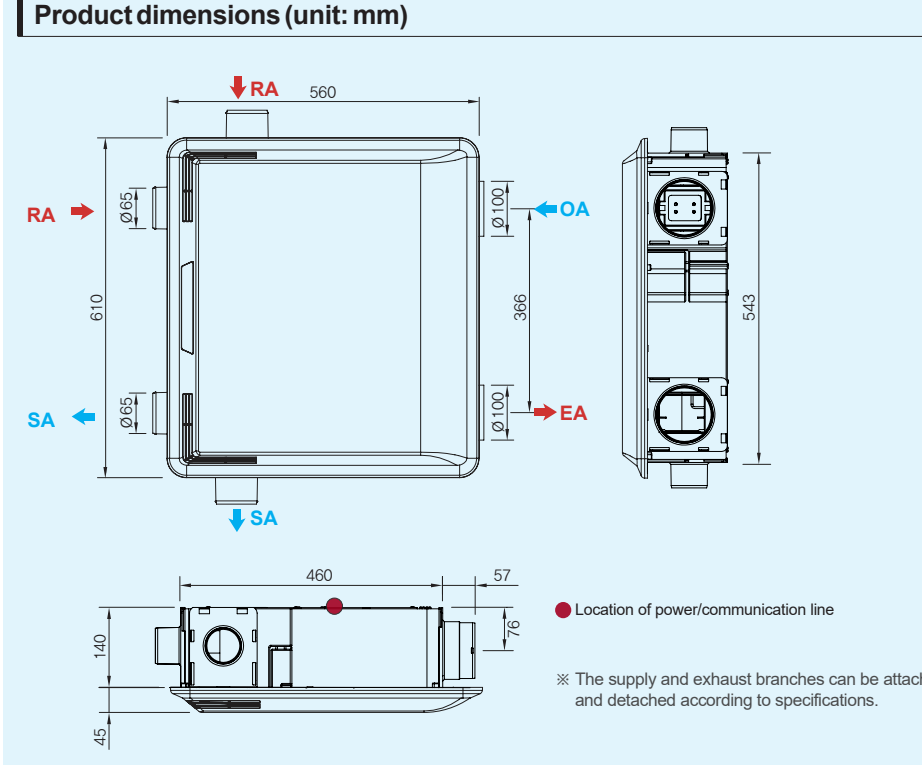


HRD-100C/HRD-100C(DS)

Housing dimension	500 X 470mm (±5mm)
Duct diameter	• Outdoor : EA-OA: Ø100 • Indoor : RA-SA: Ø65

- BLDC Fan-Motor (High efficiency / Low noise)
- Minimization of energy loss thanks to ERV
- High-efficiency cross-flow type enthalpy recovery element
- 3 levels of air volume control (High / Medium / Low)
- Multi-branch
- Automatic ventilation / timer / filter check notification
- Air pollutant removal, dust, soot, yellow dust prevention
- HEPA filter

Product dimensions (unit: mm)



● Location of power/communication line

※ The supply and exhaust branches can be attached and detached according to specifications.

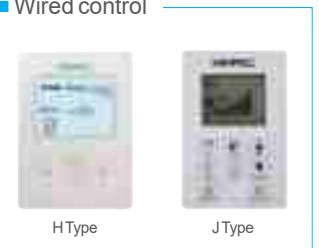
Controller

■ Remote control



Bar Type LCD Type (Optional)

■ Wired control



H Type J Type

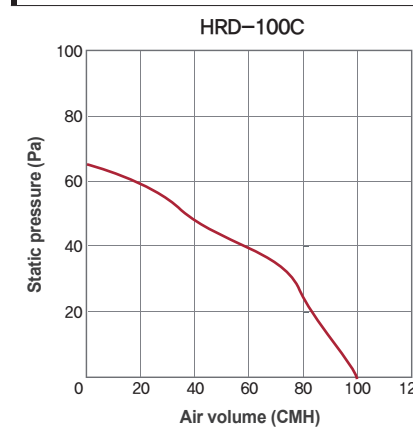
■ Wired control (CO₂ + PM sensor)



HUEVENCO1 (Optional) HUEVENCO2 (Optional)

Performance

HRD-100C



Static pressure (Pa)

Air volume (CMH)

Grille



F Grille
610(W) X 560(D) X 45(H)

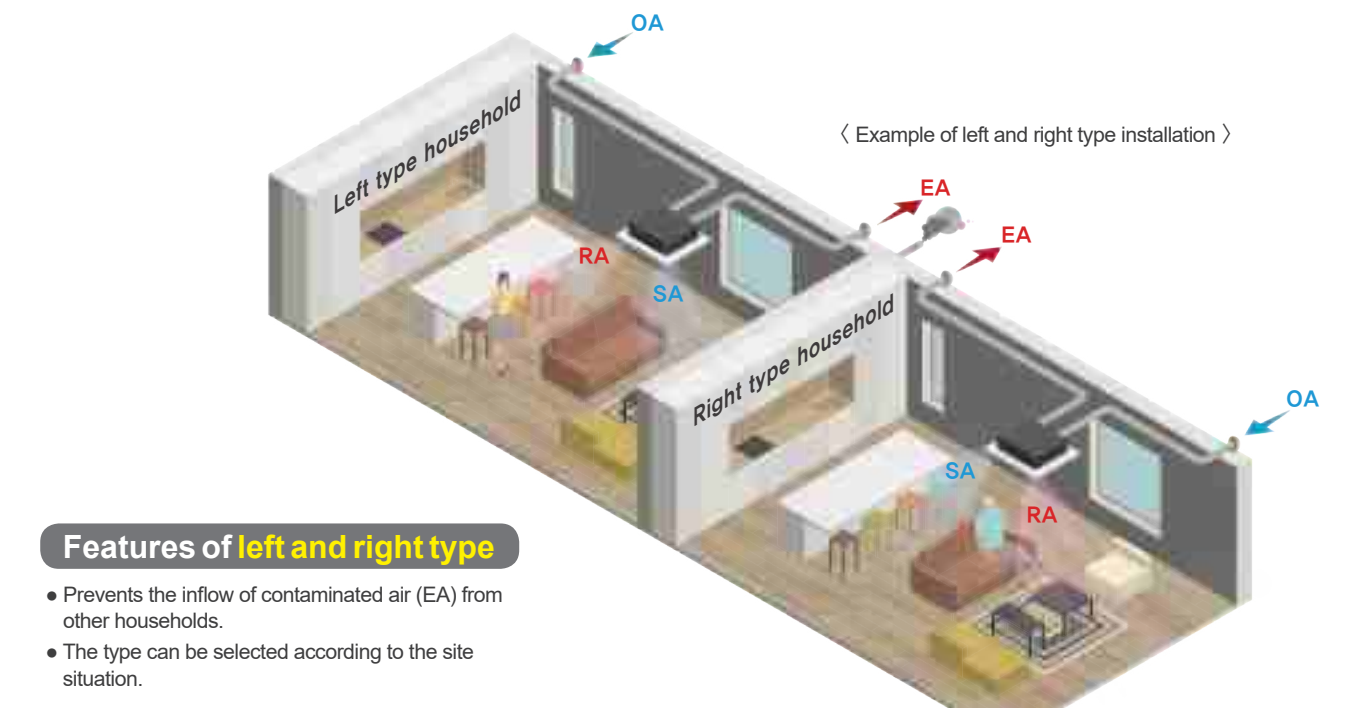


D Grille
620(W) X 560(D) X 39(H)

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	HRD-100C		HRD-100C(DS)	
Power	Ø1 X 220V X 60Hz			
Mode	High	Medium		Low
Air volume (CMH)	110	100		70
Power consumption (W)	33	27		20
Noise (dB)	Below 40			
Filter	Pre + HEPA			
Enthalpy recovery efficiency (%)	74 for heating, 68 for cooling			
Product dimension (mm)	Product dimensions (mm) product body 543(W) X 460 (D) X 140(H) / Refer to the image above for the grille cover			
Weight (kg)	9			
Option	Wired control , RS485 communication, Home network linkage, Bypass, Air cleaning			

ERV Left And Right Type



Left type household

Right type household

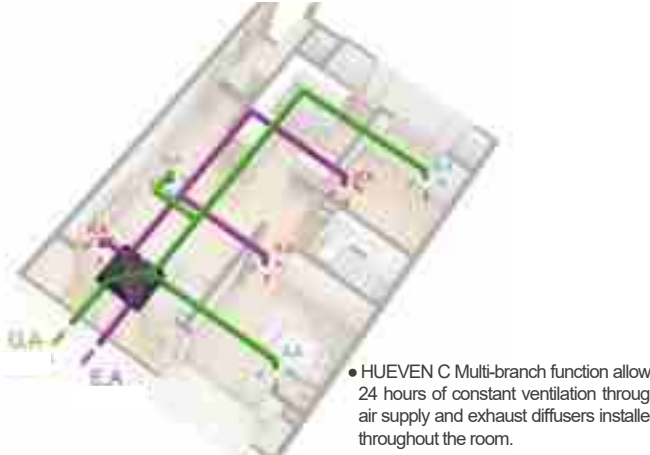
Example of left and right type installation

Features of left and right type

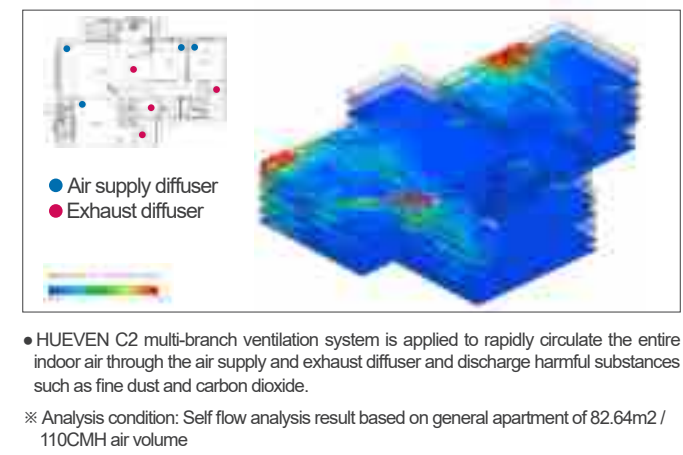
- Prevents the inflow of contaminated air (EA) from other households.
- The type can be selected according to the site situation.

Pleasant ventilation throughout the room with multi-branch function

Optimizing indoor flow by Himpel ERV



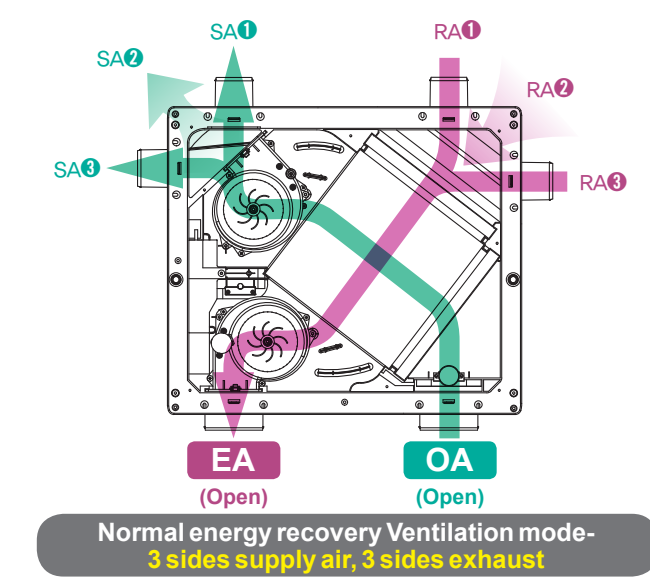
• HUEVEN C Multi-branch function allows 24 hours of constant ventilation through air supply and exhaust diffusers installed throughout the room.



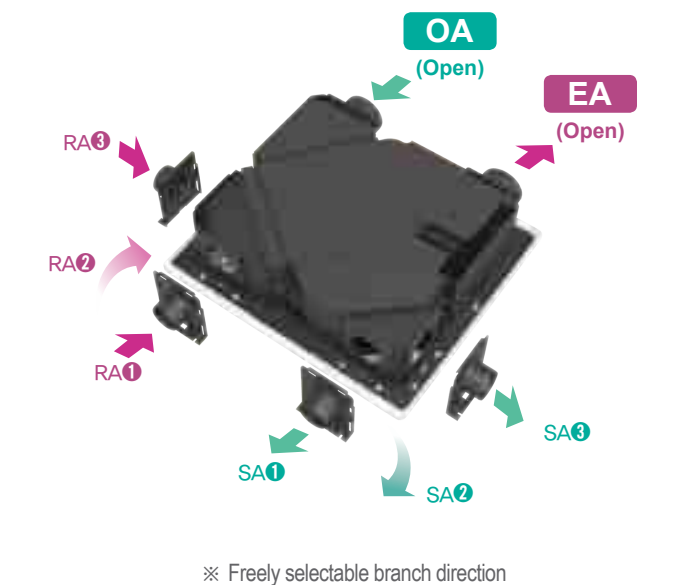
• HUEVEN C2 multi-branch ventilation system is applied to rapidly circulate the entire indoor air through the air supply and exhaust diffuser and discharge harmful substances such as fine dust and carbon dioxide.

※ Analysis condition: Self flow analysis result based on general apartment of 82.64m² / 110CMH air volume

HUEVEN C2 Energy recovery ventilation system



Normal energy recovery Ventilation mode-
3 sides supply air, 3 sides exhaust



※ Freely selectable branch direction

Hueven A (Compact, Suspended Type)



HRD1-50PLI_BC
HRD1-100PLI_BC

- Duct diameter
- HRD1-50PLI_BC:Ø100
 - HRD1-100PLI_BC:Ø125
- BLDC Fan-Motor (High efficiency / Low noise)
 - ABS material product
 - Maximization of sound absorption (Minimizing noise)
 - Convenience of filter replacement
 - HEPAfilter (H13 grade)
 - Outlet replacement (Ø100, Ø125) possible
 - Simple design

Controller

Wired control



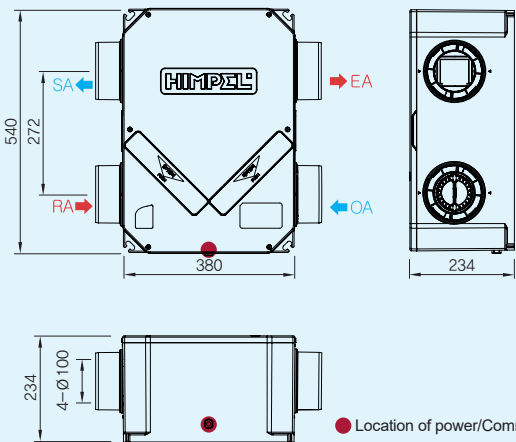
HType JType

Wired control (CO₂ + PM sensor)

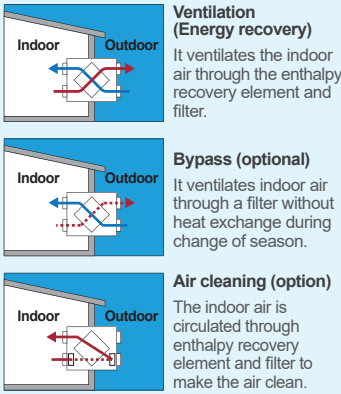


HUEVENCO1(Optional) HUEVENCO2(Optional)

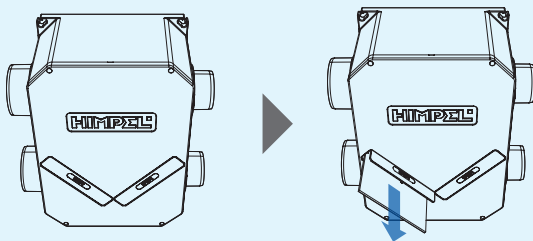
Product dimensions (unit: mm)



Mode details

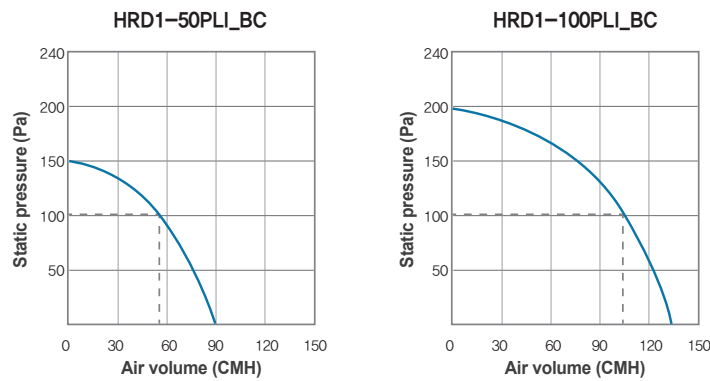


Filter case



- With a dedicated filter case, It is easy to attach and detach the filter case, making it convenient to clean and manage the filter.

Performance

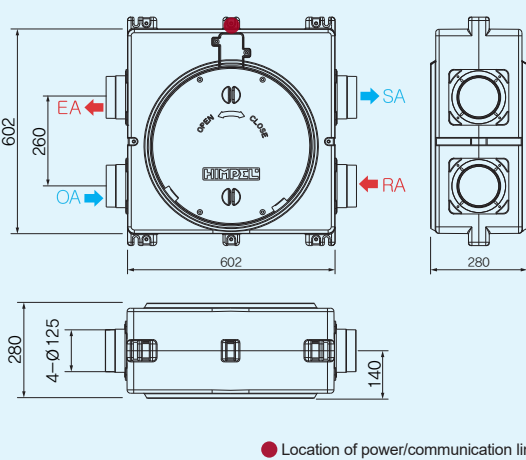


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

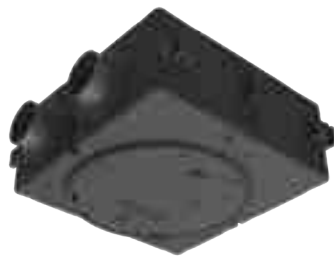
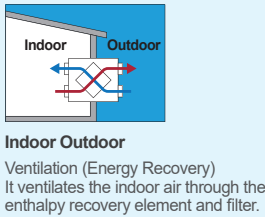
Model		HRD1-50PLI_BC			HRD1-100PLI_BC		
Power		1Ø X 220V X 60Hz					
Mode		High	Medium	Low	High	Medium	Low
Air volume (CMH)		70	50	30	120	100	80
Power consumption (W)		30	24	18	46	40	33
Noise (dB)		Below 40					
Enthalpy recovery efficiency (%)	Heating	75			70		
	Cooling	65			56		
Filter		Pre + HEPA					
Weight (kg)		7					
Product dimension (mm)		380(W) X 540(D) X 234(H)					
Option		Bypass, Air cleaning					

Hueven E (Suspended Type)

Product dimensions (unit: mm)



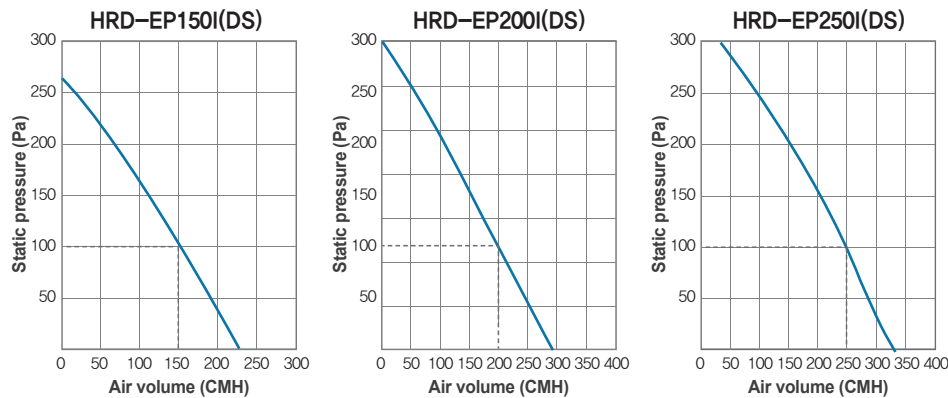
Mode details



HRD-EP150I(DS)
HRD-EP200I(DS)
HRD-EP250I(DS)

- Duct diameter
- HRD-EP150I(DS):Ø125
 - HRD-EP200I(DS):Ø125
 - HRD-EP250I(DS):Ø150
- Eco-friendly EPP material product
 - Effective in areas with condensation and salt damage
 - Free discharge direction
 - Maximization of sound absorption (Minimizing noise)
 - HEPAfilter (H13 grade)

Performance



Controller

Wired control



HType JType

Wired control (CO₂ + PM sensor)

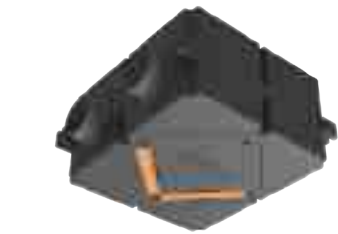


HUEVENCO1(Optional) HUEVENCO2(Optional)

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HRD-EP150I(DS)			HRD-EP200I(DS)			HRD-EP250I(DS)		
Power		1Ø X 220V X 60Hz								
Mode		High	Medium	Low	High	Medium	Low	High	Medium	Low
Air volume (CMH)		170	150	130	220	200	180	270	250	230
Power consumption (W)		62	49	37	90	77	66	119	109	98
Noise (dB)		Below 50								
Enthalpy recovery efficiency (%)	Heating	77			72			71		
	Cooling	66			62			57		
Filter		Pre + HEPA								
Weight (kg)		9								
Product dimension (mm)		602(W) X 602(D) X 280(H)								

Hueven EBSN (Slim, Suspended Type)



HRD-EP50IBSN
HRD-EP100IBSN
HRD-EP150IBSN

- Duct diameter

Ø125
- BLDC Fan-Motor
(High efficiency / Low noise)
 - Eco-friendly EPP material product
 - Effective in areas with condensation and salt damage
 - Free discharge direction
 - Maximization of sound absorption (Minimizing noise)
 - Bypass, air cleaning (optional)
 - HEPA filter (H13 grade)
 - Slim type

Controller

Wired control

HType

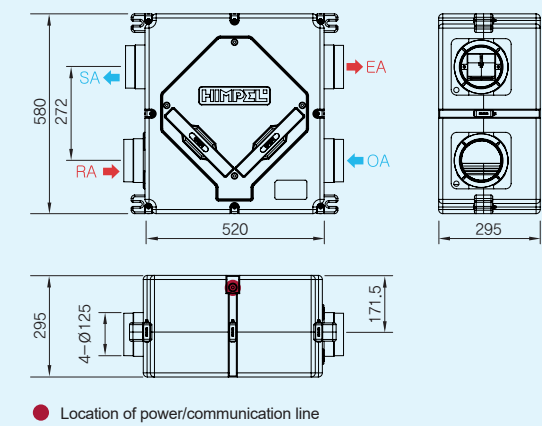
JType

Wired control (CO₂ + PM sensor)

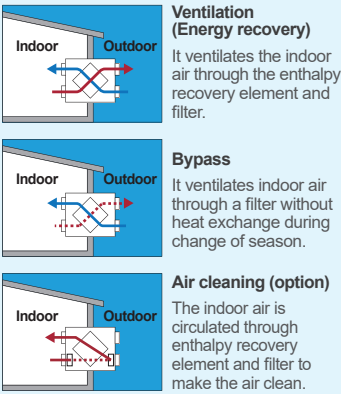
HUEVENCO1(Optional)

HUEVENCO2(Optional)

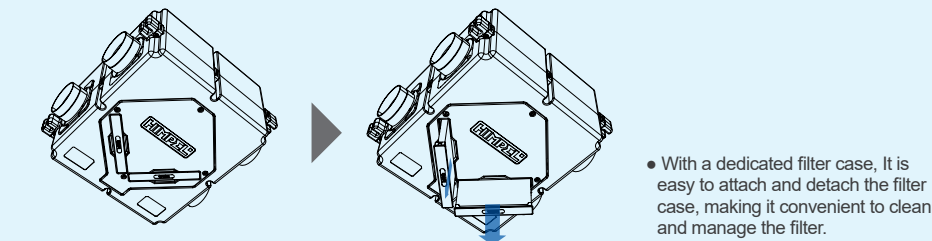
Product dimensions (unit: mm)



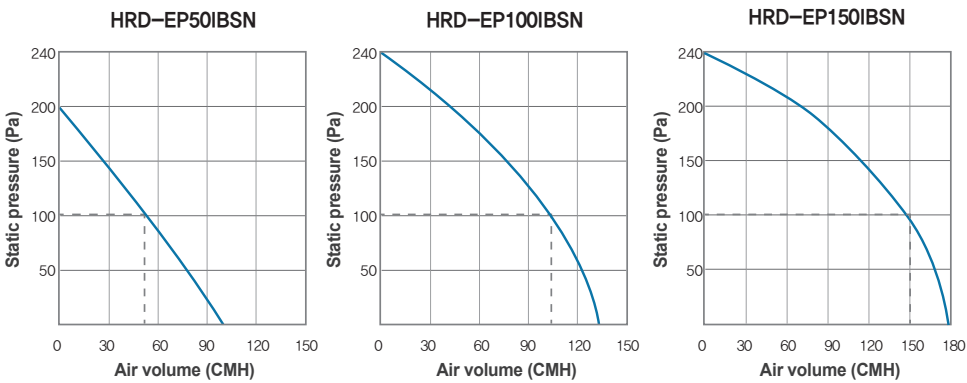
Mode details



Filter case



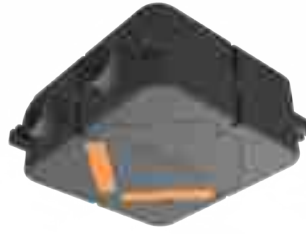
Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HRD-EP50IBSN			HRD-EP100IBSN			HRD-EP150IBSN		
Power		1Ø X 220V X 60Hz								
Ventilation mode		High	Medium	Low	High	Medium	Low	High	Medium	Low
Air volume (CMH)		70	50	40	110	100	80	160	150	130
Power consumption (W)		28	25	18	40	34	31	67	60	51
Noise (dB)		Below 50								
Enthalpy recovery efficiency (%)	Heating	82			81			71		
	Cooling	72			70			60		
Filter		Pre + HEPA								
Weight (kg)		8								
Product dimension (mm)		580(W) X 520(D) X 295(H)								
Option		Air cleaning								

Hueven EBN (Suspended Type)



HRD-EP100IBN
HRD-EP150IBN
HRD-EP200IBN
HRD-EP250IBN

- Duct diameter

Ø125
- BLDC Fan-Motor
(High efficiency / Low noise)
 - Eco-friendly EPP material product
 - Effective in areas with condensation and salt damage
 - Free discharge direction
 - Maximization of sound absorption (Minimizing noise)
 - Bypass, air cleaning (optional)
 - HEPA filter (H13 grade)

Controller

Wired control

HType

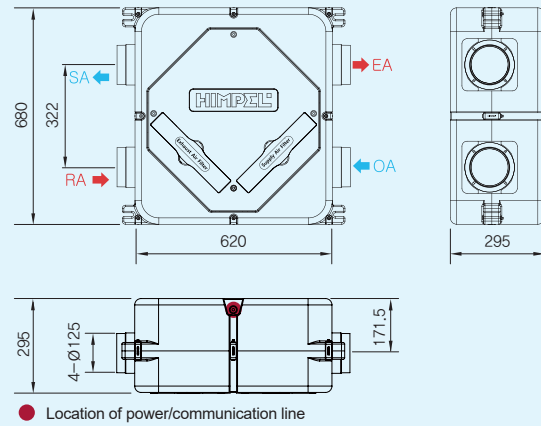
JType

Wired control (CO₂ + PM sensor)

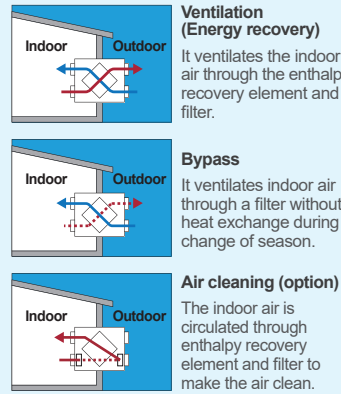
HUEVENCO1(Optional)

HUEVENCO2(Optional)

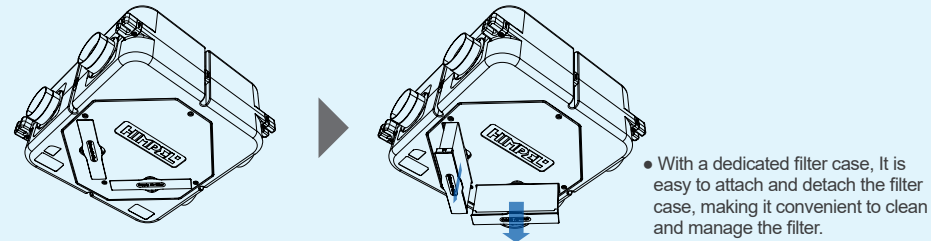
Product dimensions (unit: mm)



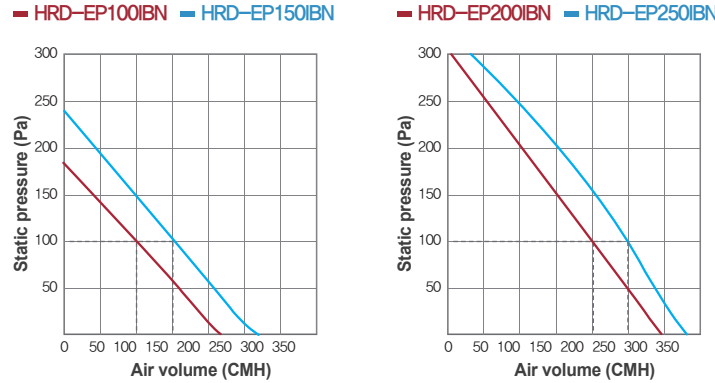
Mode details



Filter case



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HRD-EP100IBN			HRD-EP150IBN			HRD-EP200IBN			HRD-EP250IBN		
Power		1Ø X 220V X 60Hz											
Ventilation mode		High	Medium	Low	High	Medium	Low	High	Medium	Low	High	Medium	Low
Air volume (CMH)		110	100	70	160	150	110	220	200	150	270	250	150
Power consumption (W)		37	34	27	55	51	36	90	82	52	107	97	52
Noise (dB)		Below 50											
Enthalpy recovery efficiency (%)	Heating	83			77			72			70		
	Cooling	72			65			59			54		
Filter		Pre + HEPA											
Weight(kg)		9											
Product dimension(mm)		680(W) X 620(D) X 295(H)											
Option		Air cleaning											

Hueven EF 1 (Suspended Type)



HRD-EP150IBC
HRD-EP200IBC
HRD-EP250IBC

- Duct diameter Ø125
- BLDC Fan-Motor
(High efficiency / Low noise)
 - Eco-friendly EPP material product
 - Effective in areas with condensation and salt damage
 - Maximization of sound absorption
(Minimizing noise)
 - Bypass, Air cleaning (Optional)
 - High-performance 3-stage air cleaning
filter system (Pre + HEPA + Carbon Filter)
 - Slim type

Product dimensions (unit: mm)

680
390
640
408
360
360
4-Ø125
102

Mode details

Ventilation (Energy recovery)
It ventilates the indoor air through the enthalpy recovery element and filter.

Bypass
It ventilates indoor air through a filter without heat exchange during change of season.

Air cleaning
The indoor air is circulated through enthalpy recovery element and filter to make the air clean.

Filter case

● With a dedicated filter case, It is easy to attach and detach the filter case, making it convenient to clean and manage the filter.

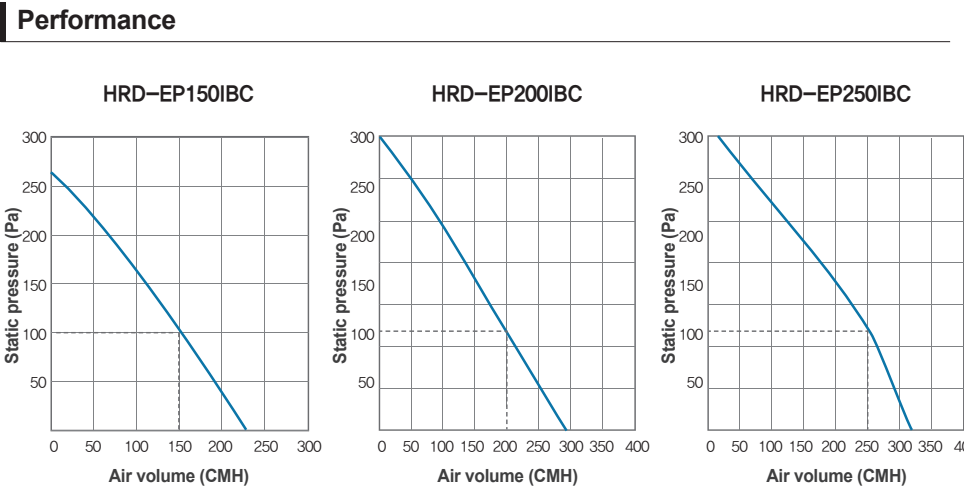
Controller

■ Wired control

HType JType

■ Wired control (CO₂ + PM sensor)

HUEVENCO1(Optional) HUEVENCO2(Optional)



Model		HRD-EP150IBC			HRD-EP200IBC			HRD-EP250IBC		
Power		1Ø X 220V X 60Hz								
Ventilation mode		High	Medium	Low	High	Medium	Low	High	Medium	Low
Air volume (CMH)		170	150	110	220	200	150	270	250	150
Power consumption (W)		65	55	38	93	74	52	110	103	52
Noise (dB)		Below 50								
Enthalpy recovery efficiency (%)	Heating	76			70			70		
	Cooling	65			60			59		
Filter		Pre + HEPA + Carbon Deodorant								
Weight(kg)		12								
Product dimension(mm)		680(W) X 640(D) X 360(H)								

Hueven EF 2 (Slim, Suspended Type)

Product dimensions (unit: mm)

600
300
540
338
300
300
4-Ø125
107

Mode details

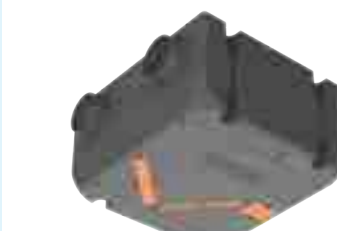
Ventilation (Energy recovery)
It ventilates the indoor air through the enthalpy recovery element and filter.

Bypass
It ventilates indoor air through a filter without heat exchange during change of season.

Air cleaning
The indoor air is circulated through enthalpy recovery element and filter to make the air clean.

Filter case

● With a dedicated filter case, It is easy to attach and detach the filter case, making it convenient to clean and manage the filter.



HRD-EP100IBC
HRD-EP150BCN

- Duct diameter Ø125
- BLDC Fan-Motor
(High efficiency / Low noise)
 - Eco-friendly EPP material product
 - Effective in areas with condensation and salt damage
 - Free discharge direction
 - Maximization of sound absorption
(Minimizing noise)
 - Bypass, air cleaning (optional)
 - High-performance 3-stage air cleaning
filter system (Pre + HEPA + Carbon Filter)
 - Slim type

Performance

HRD-EP100IBC HRD-EP150BCN

Controller

■ Wired control

HType JType

■ Wired control (CO₂ + PM sensor)

HUEVENCO1(Optional) HUEVENCO2(Optional)

Model		HRD-EP100IBC			HRD-EP150BCN		
Power		1Ø X 220V X 60Hz					
Ventilation mode		High	Medium	Low	High	Medium	Low
Air volume (CMH)		120	100	80	170	150	130
Power consumption (W)		47	39	32	65	59	52
Noise (dB)		Below 50					
Enthalpy recovery efficiency (%)	Heating	79			74		
	Cooling	68			61		
Filter		Pre + HEPA + Carbon Deodorant					
Weight(kg)		9					
Product dimension(mm)		600(W) X 540(D) X 300(H)					

HUEVEN EGI (Small)

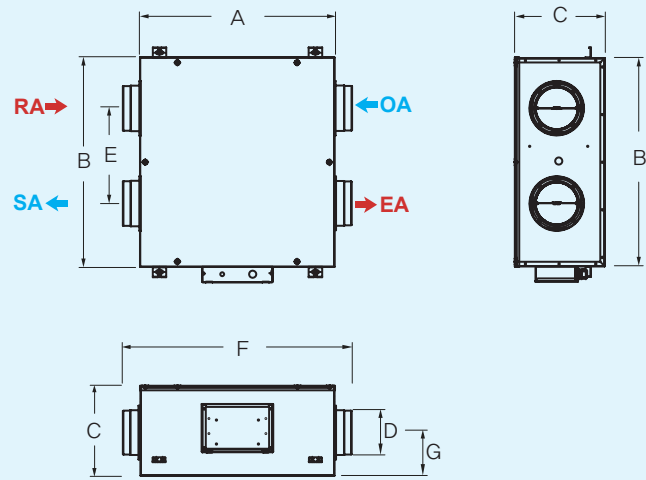


HRE-S150
HRE-S250(D)
HRE-350(D)

Duct diameter Ø125, Ø150

- BLDC Fan-Motor
(High efficiency/Low noise)
- EGI material product
- High/Medium/Low 3-stage control
- Possible to set Timer mode
- Possible to set Sleep mode
- Possible to set Automatic operation mode

Product dimensions (unit: mm)



	A	B	C	D	E	F	G
HRE-S150	450	550	230	125	275	570	115
HRE-S250(D)	580	600	270	150	370	695	106
HRE-350(D)	650	700	300	150	320	765	160

Dimension unit(mm)

Controller

- Wired control

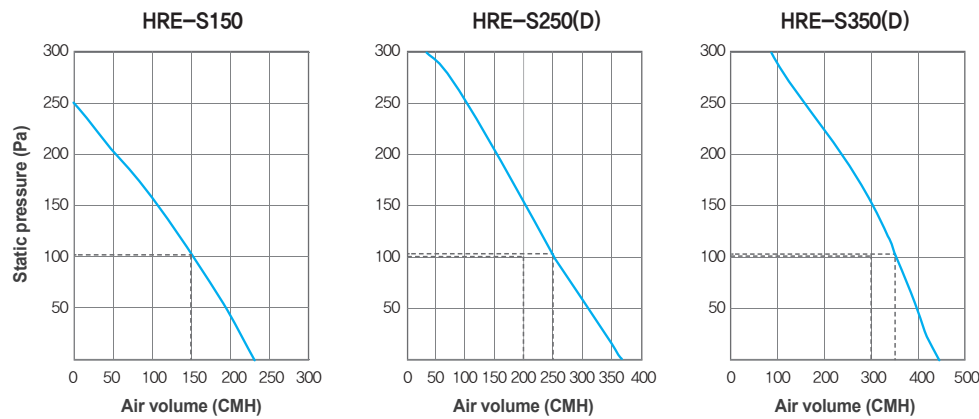


J Type



HUEVENCO2

Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	HRE-S150			HRE-S250(D)			HRE-350(D)		
Power	1Ø X 220V X 60Hz								
Ventilation mode	High	Medium	Low	High	Medium	Low	High	Medium	Low
Air volume (CMH)	170	150	130	270	250	230	370	350	330
Power consumption (W)	65	59	50	99	92	86	143	133	124
External static pressure(Pa)	100			101			101		
Enthalpy recovery efficiency (%)	Heating	70		74			72		
	Cooling	60		63			60		
Noise (dB)	Below 50								
Filter	Pre + Medium								
Weight(kg)	23			25			32		
Product dimension(mm)	450(W)X550(D)X230(H)			600(W)X580(D)X270(H)			700(W)X650(D)X300(H)		

HUEVEN EGI (Medium, Large)

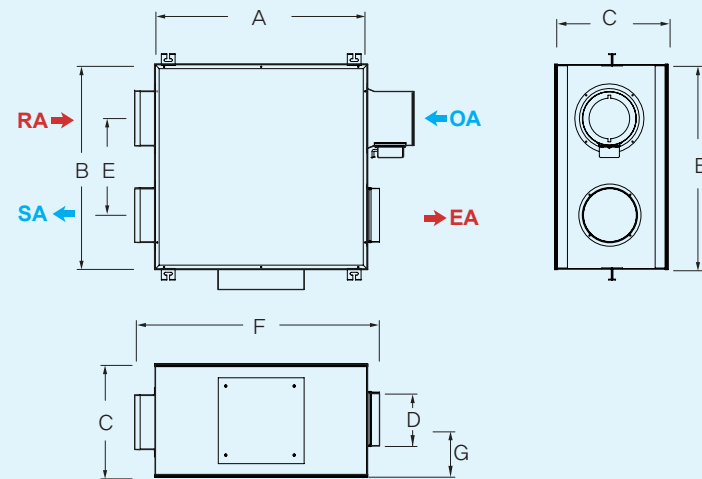


HRE-500(D)
HRE-800(D)
HRE-1000(D)

Duct diameter Ø200, Ø250

- BLDC Fan-Motor
(High efficiency/Low noise)
- EGI material product
- High/Medium/Low 3-stage control
- Possible to set Timer mode
- Possible to set Sleep mode
- Possible to set Automatic operation mode

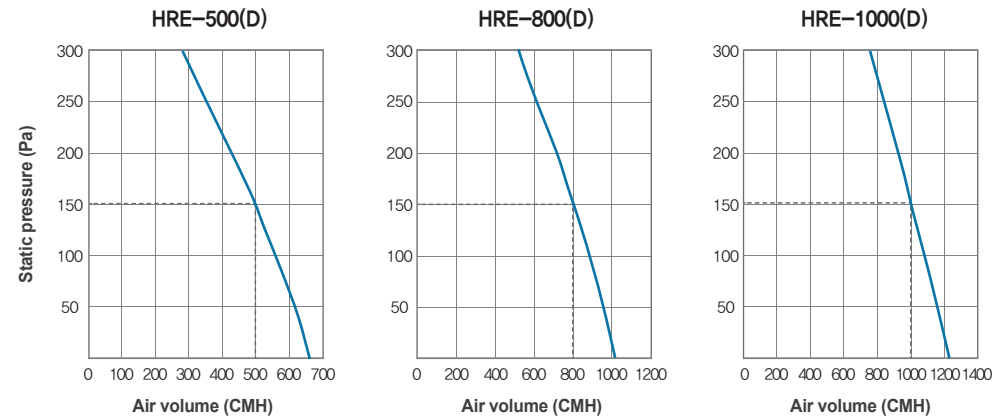
Product dimensions (unit: mm)



	A	B	C	D	E	F	G
HRE-500(D)	810	850	400	200	351	890	145
HRE-800(D)	1100	1200	400	250	720	1300	200
HRE-1000(D)	1100	1200	400	250	720	1300	160, 230

Dimension unit(mm)

Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HRE-500(D)			HRE-800(D)			HRE-1000(D)		
Power										
Ventilation mode		High	Medium	Low	High	Medium	Low	High	Medium	Low
Air volume (CMH)		550	500	350	850	800	560	1100	1000	700
Power consumption (W)		195	182	127	352	308	215	464	419	284
External static pressure(Pa)		150			150			150		
Enthalpy recovery efficiency (%)	Heating	74			74			71		
	Cooling	63			63			60		
Noise (dB)		Below 50								
Filter										
Weight(kg)		38			65			65		
Product dimension(mm)		810(W)X850(D)X400(H)			1100(W)X1200(D)X400(H)			1100(W)X1200(D)X400(H)		

HUEVEN S (Stand Type)

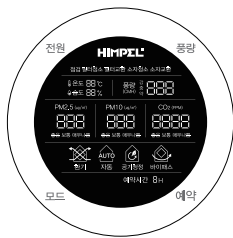


HRD2-400EGS
HRD2-400EGS_U

Duct diameter Ø150

- EGI material product
- Economical installation cost
- 5 air quality sensors applied (Ultra-fine dust, fine dust, CO₂, temperature, humidity)
- Bypass, air cleaning function
- High-performance air cleaning filter system (Pre+HEPAFilter 69T)
- Classroom, multi-purpose facilities, offices, hospitals, kindergarten

Display & Controller

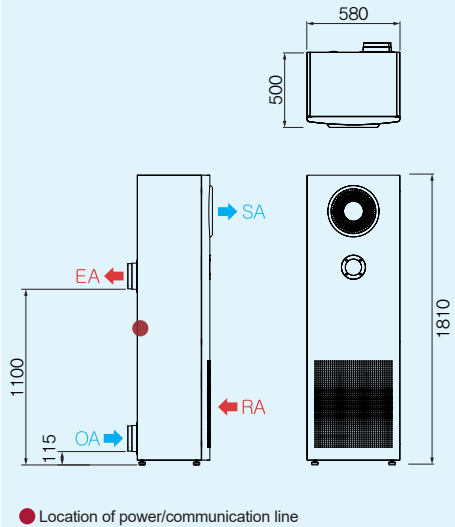


〈Indicates 5 types of air quality〉
PM2.5, PM10, CO₂, temperature, humidity



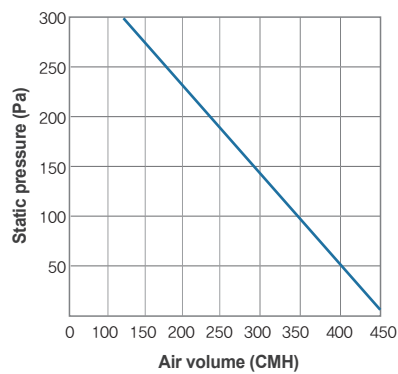
Wireless remote control (Option)

Product dimensions (unit: mm)



Performance

HRD2-400EGS, HRD2-400EGS_U

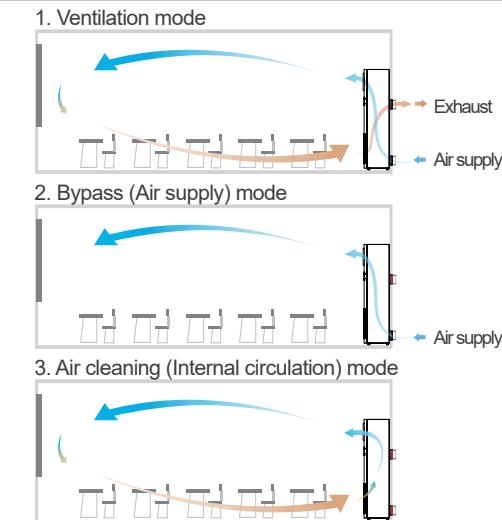


Installation example



※ Recommended installation location
Classrooms, Multipurpose Facilities, Offices, Hospitals, Kindergartens

Ventilation system

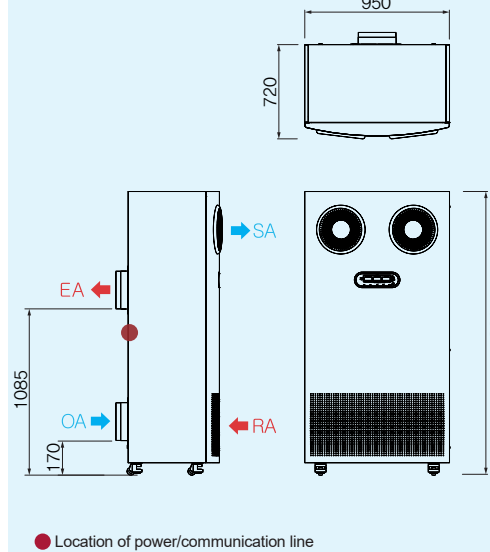


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

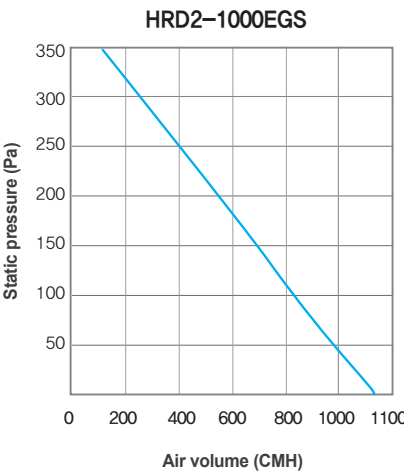
Model		HRD2-400EGS			HRD2-400EGS_U		
Power		1Ø X 220V X 60Hz					
Ventilation mode		High	Medium	Low	High	Medium	Low
Air volume (CMH)		400	250	150	400	250	150
Power consumption (W)		162	58	30	180	80	30
Noise (dB)		Below 48 (Based on High)					
Enthalpy recovery efficiency (%)	Heating	71					
	Cooling	61					
Filter		Pre(2) + HEPA(1)					
Weight(kg)		81					
Product dimension(mm)		580(W) X 500(D) X 1810(H)					
Option		Central control system, interlocking (IoT), Carbon deodorant filter, Remote control					

HUEVEN S (Stand Type)

Product dimensions (unit: mm)



Performance



Installation example



※ Recommended installation location
Classrooms, Multi-purpose facilities, Auditoriums, Gymnasiums

Display & Controller



〈3 air quality sensors displayed〉
PM2.5, PM10, CO₂



Remote control (Option)

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HRD2-1000EGS				
Power		1Ø X 220V X 60Hz				
Ventilation mode		Turbo	High	Medium	Low	Very low
Air volume (CMH)		1100	1000	500	300	200
Power consumption (W)		519	384	137	76	58
Noise (dB)		Below 53 (Based on High)				
Enthalpy recovery efficiency (%)	Heating	70				
	Cooling	51				
Filter		Pre(4) + HEPA(2)				
Weight(kg)		145				
Product dimension(mm)		950(W) X 720(D) X 1860(H)				
Option		Central control system, Interlocking (IoT), Carbon deodorant filter, Remote control				

Thermo ventilator & Ventilation fan

For healthy air quality in the bathroom, polluted air is discharged to the outside, moisture is removed from the bathroom quickly, noise is reduced, and the efficiency is up, and there are motorized dampers.

	HUEZENTTE 2 (Premium Type) FHD-P150S1	34
	ZEROC (Constant Air Volume, BLDC, MD Integrated Type) FZD-C90S	35
	ZEROC (Constant Air Volume, Slim Type, MD Integrated Type) FZA2-C90_MD	36
	ZEROC (Constant Air Volume, MD Integrated Type) HV3-70X(MD-N), HV3-80X(MD-N)	37
	ZEROC (Constant Air Volume) HV3-70X, HV3-80X	38
	ZEROC (Constant Air Volume, Hybrid) HV3-80NV	39
	CLEVER MD	40
	ZEROC (Constant Air Volume, Multi-Branch Type) FZA-C110S	41
	ZEROC (Constant Air Volume, Separate Room Ventilation Type) HV3-80SF	42
	ZEROC (High Static Pressure) HV3-100, HV3-120, HV3-150	43
	CYFLREX (LED Light Type) FFA-80L	45
	ZEROC (LED Light Type) FZA-L110S1	46
	ZEROC (LED Light Type) FZD-L80S / HV3-81JG	47
	ZEROC (Constant Air Volume, Slim Type) FZA-C80	48
	ZEROC (Constant Air Volume, MD Integrated Type) FZA-C90SM	49

	LIVO (BLDC) FLD2-C90	50
	LIVO (High Static Pressure) L2-100, L2-120, L2-150, FLA-C90	51
	LIVO (Constant Air Volume, Slim Type) L2-80SM	52
	LIVO (High Static Pressure, High Air Volume) L2-250, L2-300	53
	ZAION (High Air Volume) HV-180, HV-220, HV-250	54
	FLREX (Medium Static Pressure) C2-100	55
	TURBO 747 (Low Static Pressure) FZA-70S1	56
	CYCLONE (Low Static Pressure) JV-201	57
	TURBO FAN / PIPE FAN (Low Static Pressure) JV-102, PV-61	58, 59
	ZEROC (Wall Mounted Type) HV-81WF	60
	Ventilation Fan (Wall Mounted Type) FWA-R125D100, FWA-R125D150	61
	Ventilation Fan (Wall Mounted Type) FWA-R125W100	62
	Ventilation Fan (Wall Mounted Type) FWA-S200W540	63
	Ventilation Fan (Wall Mounted Type) FWA-S250W350, FWA-S250W460	64

Thermo ventilator

Constant air volume / High static pressure



		FHD-P150S1	
		Air volume	Power consumption(W)
Ventilation	High	120	9
	Medium	90	7
	Low	70	6
Warm air	High	90	1,200
	Low	70	1,100
Dehumidification		80	Heating : 600 Cooling : 30
Dry	High	190	Heating:1,500/Cooling:62
	Low	150	Heating:1,200/Cooling:20
Natural wind		-	
Freeze protection		-	
Constant air volume		○	
Damper		Motorized damper	
Duct diameter (Ø)		100	
Product dimension (mm) W×D×H		477x313x149	
Note		BLDC Motor, Wall mounted type (Optional), Remote control type	

Ventilation fan

Constant air volume / High static pressure



	HV3-70X, 80X(MD-N)	HV3-70X	HV3-80X	HV3-80NV	HV3-80SF	FZA-C80	FZD-C90S	FZA2-C90_MD
Constant air volume	○	○	○	○	○	○	○	○
Air volume (CMH)	91	75	91	91	91	85	90	90
Damper	Motorized damper	Magnetic damper (Optional)	Magnetic damper (Optional)	Motorized damper	Motorized damper	Magnetic damper (Optional)	Motorized damper	Integrated motorized damper
Air volume control Grill	-	-	-	○	○	-	-	-
Expandable branch	-	-	-	○	○	-	○	-
High/Low control switch	-	-	-	○	-	-	-	-
Duct diameter (Ø)	100	100	100	100	100	100	100	100
Product dimension (mm) W×D×H	270x270x166	270x270x166	270x270x166	270x270x168	270x270x168	270x270x131	270x270x168	270x270x139
Note	Various actions option	-	Various actions option	Various actions, Clever MD options	Various actions option	Slim type	BLDC motor	Slim type

High static pressure



	FZA-C90SM	HV3-100	HV3-120	HV3-150	FZA-C110S	FFA-80L	FZA-L110S1	FZD-L80S HV3-81JG	HV-81WF
Constant air volume	○	-	-	-	○	-	○	○	○
Air volume (CMH)	93	100	120	145	110	90	110	83	75
Damper	Motorized damper	Magnetic damper (Optional)	Magnetic damper (Optional)	Magnetic damper (Optional)	Magnetic damper (Optional)	Magnetic damper (Optional)	Magnetic damper (Optional)	Motorized damper	-
LED light	-	-	-	-	-	○	○	○	-
Air volume control Grill	-	○	○	○	○	-	-	-	-
Expandable branch	○	○	○	○	○	-	○	○	-
High/Low control switch	-	○	○	○	○	-	-	-	-
Duct diameter (Ø)	100	100	100	100	100	100	100	100	100
Product dimension (mm) W×D×H	270x270x131	270x270x166	270x270x166	270x270x166	278x278x166	220x220x160	278x278x166	271x271x166 275x275x166	260x260x163
Note	Slim type, Various actions option	Various actions, Integrated MD option	Various actions, Integrated MD option	Various actions, Integrated MD option	Various actions, separated MD option	Various actions, separated MD option	-	-	Wall mounted type, 4-way installation possible

High static pressure



	L2-80SM	FLD2-C90	FLA-C90	L2-100	L2-120	L2-150	L2-250	L2-300
Constant air volume	○	○	○	-	-	-	-	-
Air volume (CMH)	82	90	90	100	120	150	250	300
Damper	Gravity type damper	Gravity type damper	Gravity type damper	Gravity type damper	Gravity type damper	Gravity type damper	Gravity type damper	Gravity type damper
Expandable branch	○	○	○	○	○	○	○	○
High/Low control switch	-	○	○	○	○	○	○ (High/Medium/Low)	○ (High/Medium/Low)
Duct diameter (Ø)	100	100	100	100	100	100	100/125	100/125
Product dimension (mm) W×D×H	254×254×135	260×260×160	260×260×160	260×260×160	260×260×160	260×260×160	334×334×190	334×334×190
Note	Ceiling embedded type, Slim type	Ceiling embedded type, BLDC motor	Ceiling embedded type	Ceiling embedded type	Ceiling embedded type	Ceiling embedded type	Ceiling embedded type	Ceiling embedded type

High air volume | Medium static pressure | Low static pressure



	FWA-R125D100 FWA-R125D150	FWA-R125W100	FWA-S200W540	FWA-S250W350 FWA-S250W460	HV-180 HV-220	HV-250	C2-100	FZA-70S1	JV-201
Constant air volume	-	-	-	-	-	-	-	-	-
Air volume (CMH)	100 / 150	140	540	350 / 469.5	180 / 220	250	90	70	65
Damper	-	-	-	-	Gravity type damper	Gravity type damper	Gravity type damper	Magnetic damper	Gravity type damper
Duct diameter (Ø)	125 / 150	200	250	250	100	125	100	100	100
Product dimension (mm) W×D×H	231x155x248	250x168x256	320x77x326	320x77x326	320x320x180	320x320x180	205x205x160	219x219x157	205x205x165
Note	Wall mounted type	Wall mounted type	Wall mounted type	Wall mounted type	High Air volume (CMH)	High Air volume (CMH)	M, F, L Grille	Free perforation size	M, C, S Grille

Huezentte

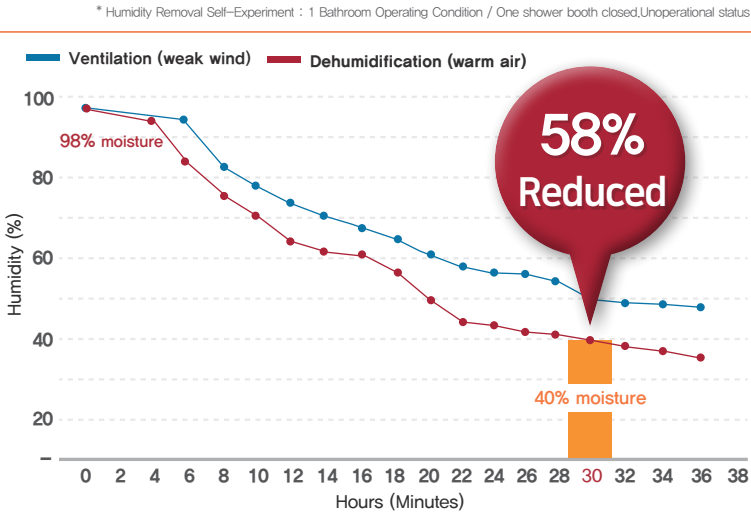
Huezentte Air Science and Technology

Computational Fluid Dynamics, ultra-precise NC machining BLDC motor realizes high efficiency, low noise, and low power.

Excellent moisture removal

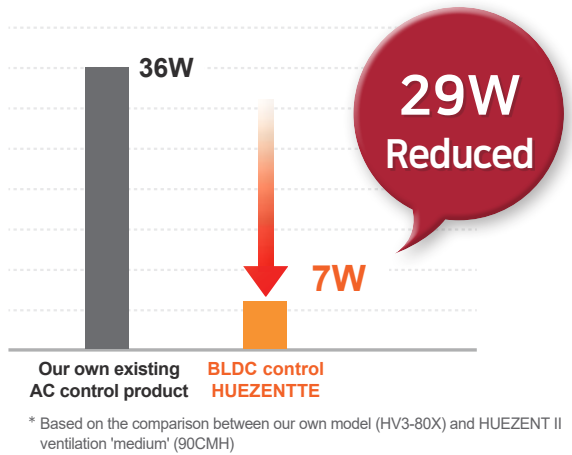


* Hugen's 'dehumidifying (drying)' action image



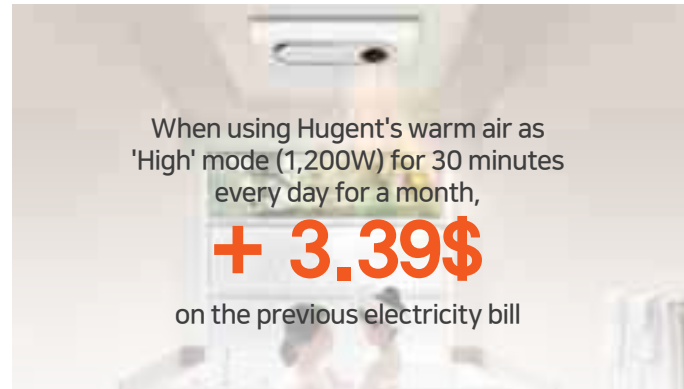
High efficiency, low power and low noise with the innovative motor control technology

Low power consumption



Electricity bill you don't need to worry about!

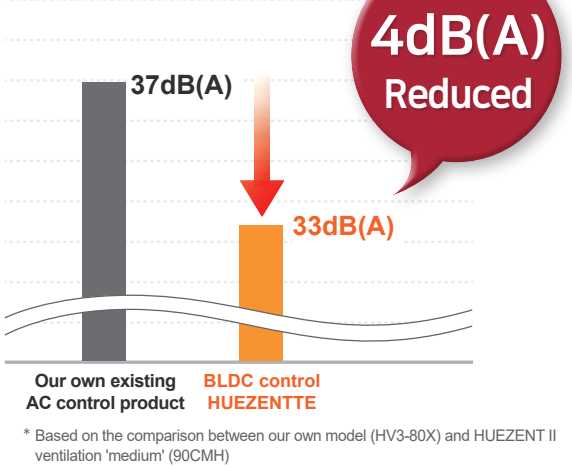
Based on the average monthly electricity bill for a family of 4, the estimated total electricity bill is 51.38\$ per month when using Hugen additionally.



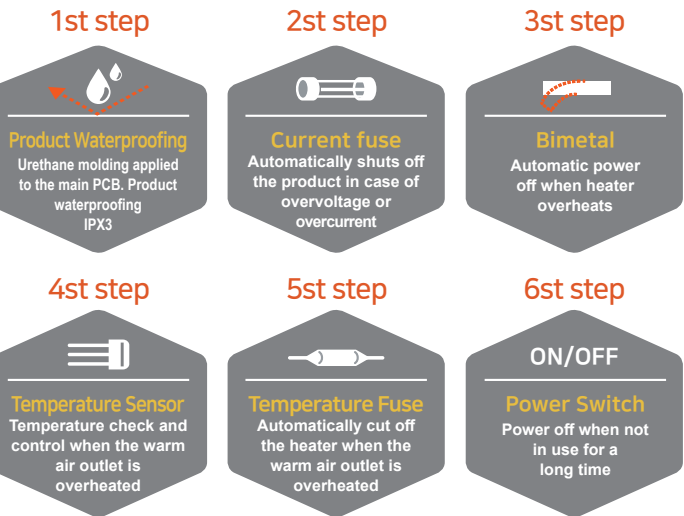
* Fees may vary depending on the high-voltage and low-voltage housing.
* Source of the monthly electricity bill for a family of 4: The 8th Basic Plan for Power Supply and Demand by the Ministry of Trade, Industry and Energy
* Source of the Monthly Average Fee using HUEZENTTE: Korea Electric Power Corporation [Calculation of the product fee used]

Optimized low-noise flow path technology

Low noise

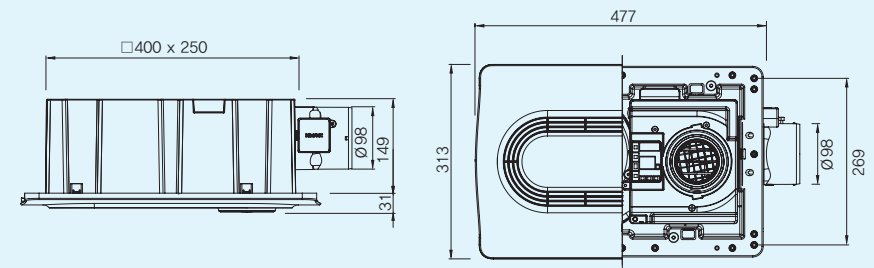


6-Step Safety Device Applied

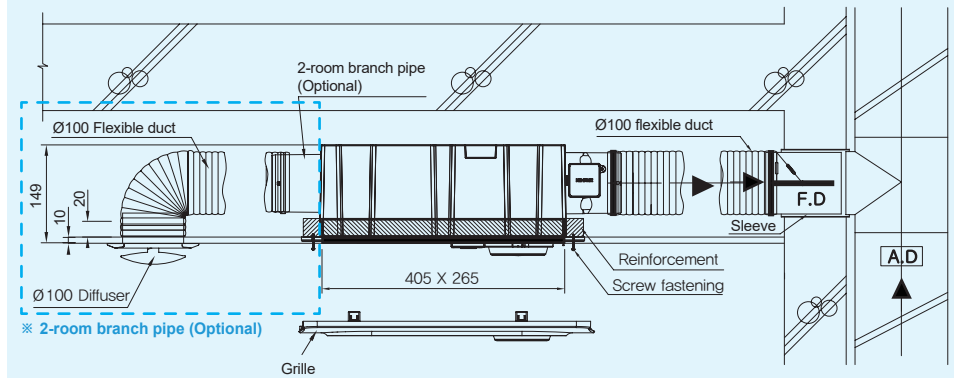


HUEZENTTE 2 (Premium Type)

Product dimensions (unit: mm)



How to install the product

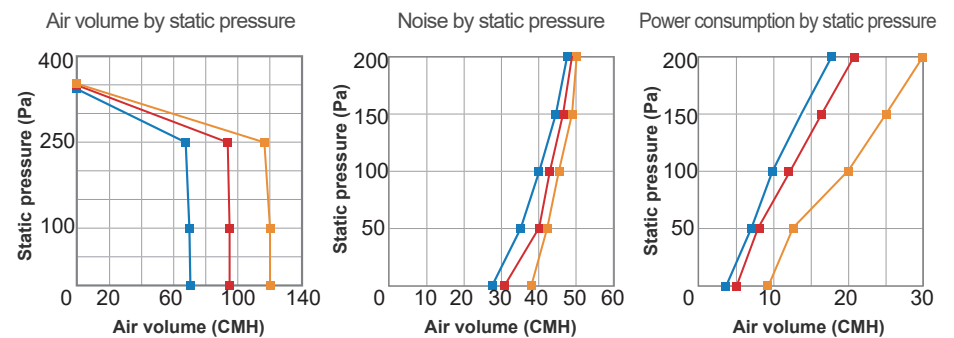


FHD-P150S1

Housing dimension	405X265mm (±5mm)
Duct diameter	Ø100

- BLDC Fan-Motor (High efficiency / Low noise)
- Certified as a bathroom ventilation fan with constant air volume
- 6-fold safety device
- High/Medium/Low air volume control
- PTC heater applied
- Motorized damper
- Two-room expandable exhaust (Optional)
- Pre-filter / Remote control

Performance



* Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Item	Ventilation	Warm air	Dehumidification/Drying	Hair/Body dry
FHD-P150S1	○	○	○	○
Air volume (CMH)	H	120	90	190
	M	90	-	-
	L	70	70	150
Power consumption(W)	H	9	1,200	1,500(Heating) / 62(Cooling)
	M	7	-	-
	L	6	1,100	1,200(Heating) / 20(Cooling)
Noise (dB)	H	38	42	59
	M	33	-	-
	L	28	38	54
Max. static pressure(Pa)	H	350	-	-
	M	350	-	-
	L	350	-	-
Product dimension (mm)	477(W) X 313(D) X 149(H)			
Weight (kg)	4.9			
Option	Wall mounted type (External exposure of the flexible duct to activate the ventilation mode), 2-room expandable exhaust			

Remote control



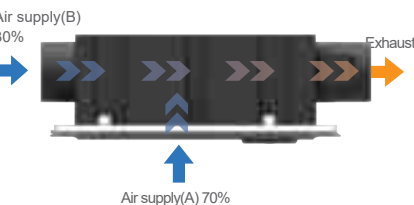
Product damper

Motorized damper



Air volume ratio by branch

* The standard is within 2.0m of flexible, depending on the installation condition.



ZEROC (Constant Air Volume, BLDC, MD Integrated Type)



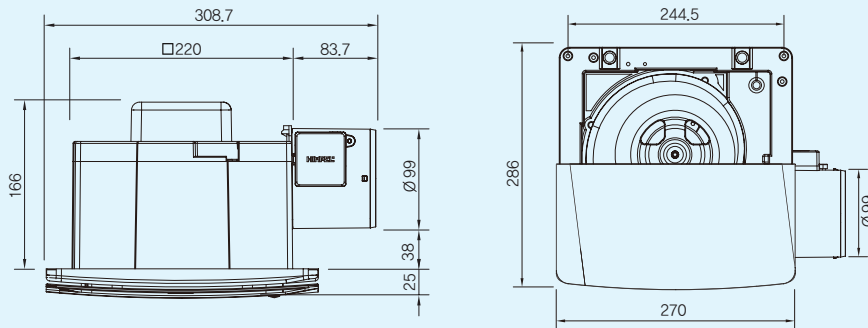
FZD-C90S

Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

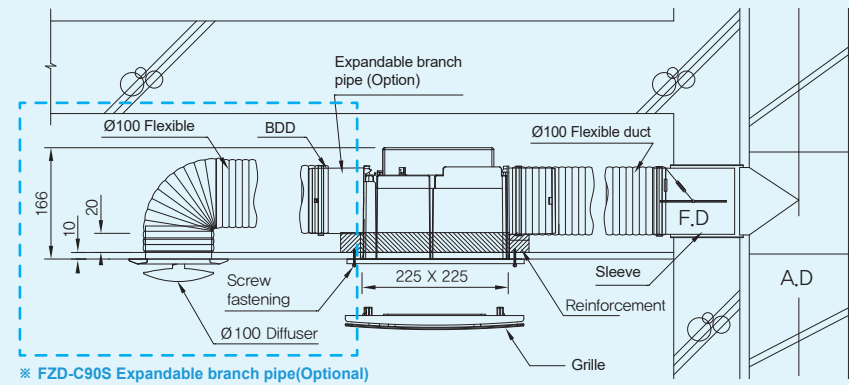
- BLDC Fan-Motor (High efficiency / Low noise)
- Certified as a bathroom ventilation fan with constant air volume
- Motorized damper
- Multi expandable branch (Option)



Product dimensions (unit: mm)

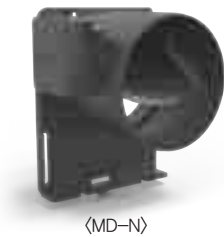


How to install the product

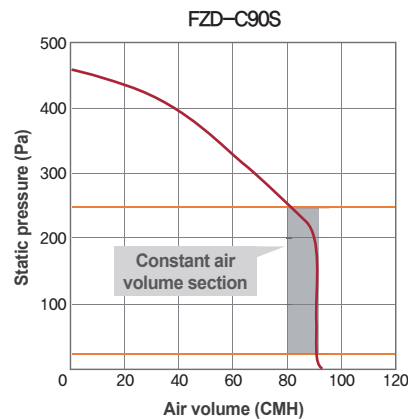


Product damper

Motorized damper



Performance



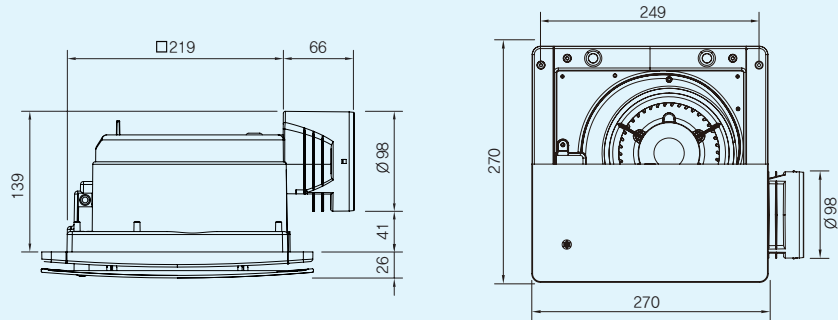
Grille



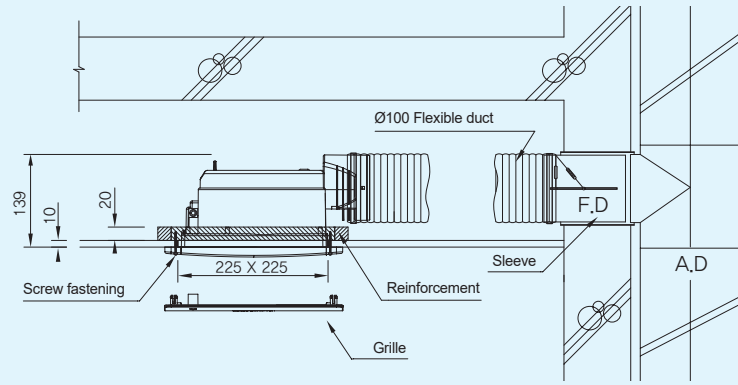
Model		FZD-C90S
Static pressure (Pa)		25~250
Air volume (CMH)		90
Air volume (CMH)		81~99
Power consumption(W)		6
Noise (dB)		36
Product dimension (mm)		270(W) X 270(D) X 166(H)
Weight (kg)		2.6
Power		1Ø / 220V / 60Hz
Operation Option		-
Option		Power lamp(L), multi expandable branch
Motorized damper (MD-N)	Power consumption(W)	2.5
	Product dimension (mm)	Ø100 X 101L
	Material	ABS

ZEROC (Constant Air Volume, BLDC, Slim Type)

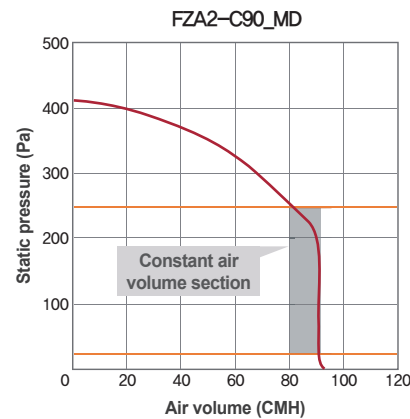
Product dimensions (unit: mm)



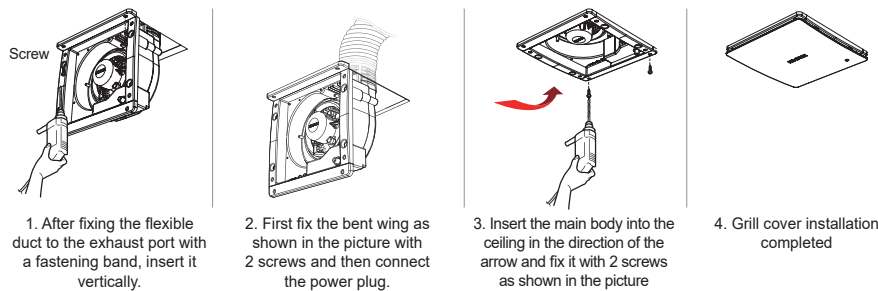
How to install the product



Performance



Convenient installation of the ventilator



Model		FZA2-C90_MD
Static pressure (Pa)		25~250
Air volume (CMH)		90
Air volume (CMH)		81~99
Power consumption(W)		37
Noise (dB)		38
Product dimension (mm)		270(W) X 270(D) X 139(H)
Weight (kg)		2.1
Power		1Ø / 220V / 60Hz
Option		Power lamp (L)

ZEROC (Constant Air Volume, MD Integrated Type)



HV3-70X(MD-N)
HV3-80X(MD-N)

Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- Certified as a bathroom ventilation fan with constant air volume
- Low noise
- Various operation options
- Motorized damper
- Multi expandable branch (Option)
- IoT – Smartphone control (Option)

Product damper

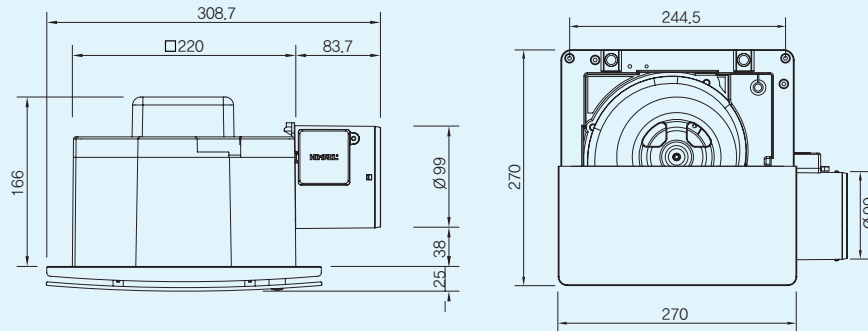
Motorized damper



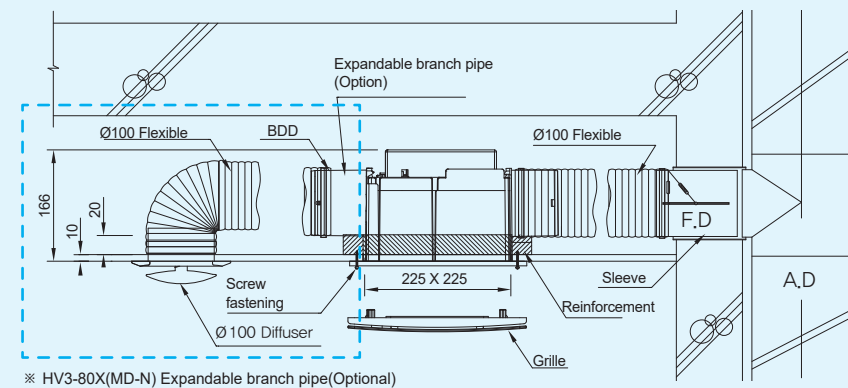
Grille



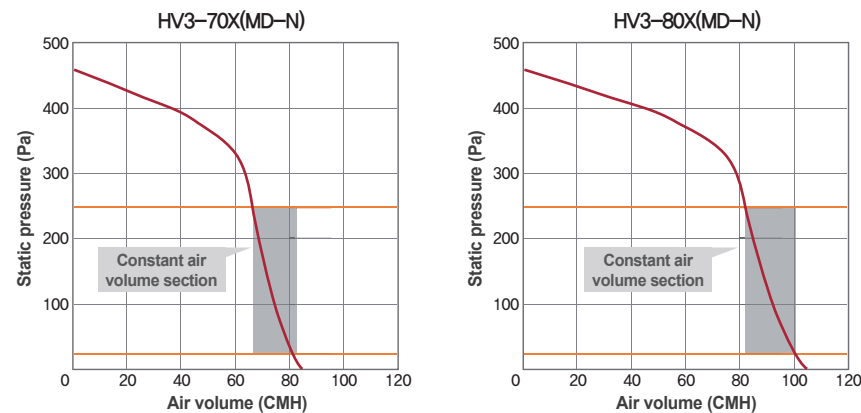
Product dimensions (unit: mm)



How to install the product



Performance

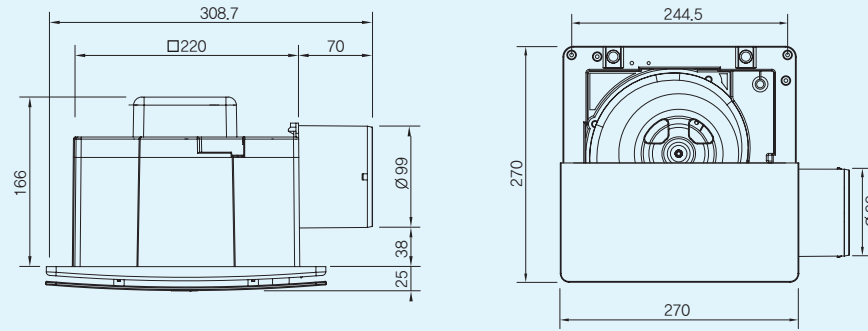


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

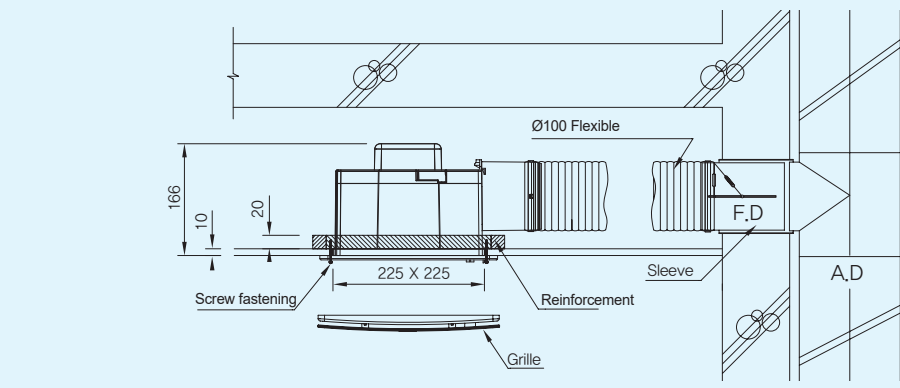
Model		HV3-70X(MD-N)	HV3-80X(MD-N)
Static pressure (Pa)		25~250	25~250
Air volume (CMH)		75	91
Air volume (CMH)		68~83	83~100
Power consumption(W)		31	37
Noise (dB)		32	37
Product dimension (mm)		270(W) X 270(D) X 166(H)	
Weight (kg)		2.6	
Power		1Ø / 220V / 60Hz	
Option		FGrille, MGrille, SMGrille, Power lamp (L), Multi expandable branch, IoT	
Motorized damper (MD-N)	Power consumption(W)	2.5	
	Product dimension (mm)	Ø100 X 101L	
	Material	ABS	

ZEROC (Constant Air Volume)

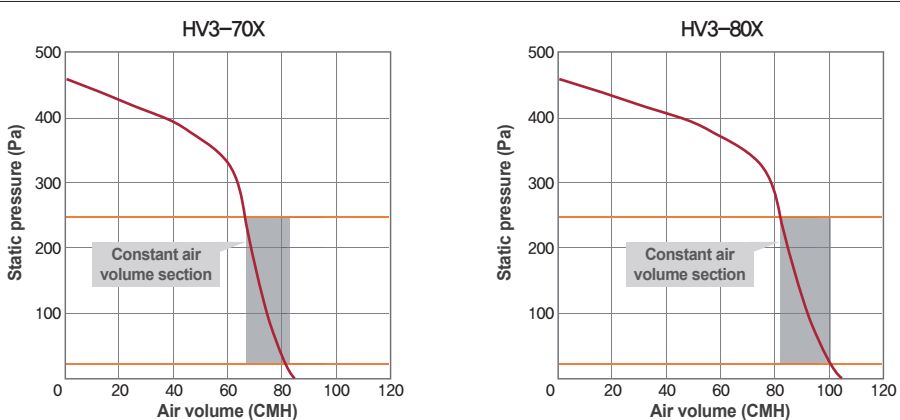
Product dimensions (unit: mm)



How to install the product



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HV3-70X	HV3-80X
Static pressure (Pa)		25~250	25~250
Air volume (CMH)		75	91
Air volume (CMH)		68~83	83~100
Power consumption(W)		31	36
Noise (dB)		32	37
Product dimension (mm)		270(W) X 270(D) X 166(H)	
Weight (kg)		2.2	
Power		1Ø / 220V / 60Hz	
Option		FGrille, MGrille, Power lamp (L)	



HV3-70X / HV3-80X

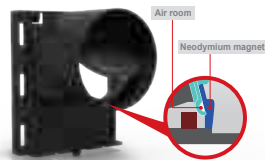
Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- Certified as a bathroom ventilation fan with constant air volume
- Low noise
- Various operation options
- Magnetic damper
- Multi expandable branch (Option)



Product damper

Magnetic damper

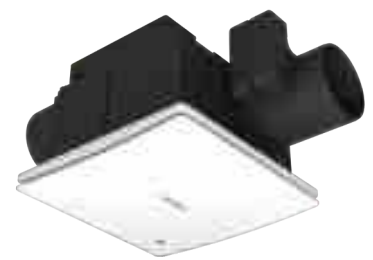


- ① Air tight structure
- ② Neodymium magnet structure to prevent back draft

Grille



ZEROC (Constant Air Volume, Hybrid)



HV3-80NV

Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- Certified as a bathroom ventilation fan with constant air volume
- Low noise
- Various operation options
- Motorized damper

Product damper(Optional)

Motorized damper

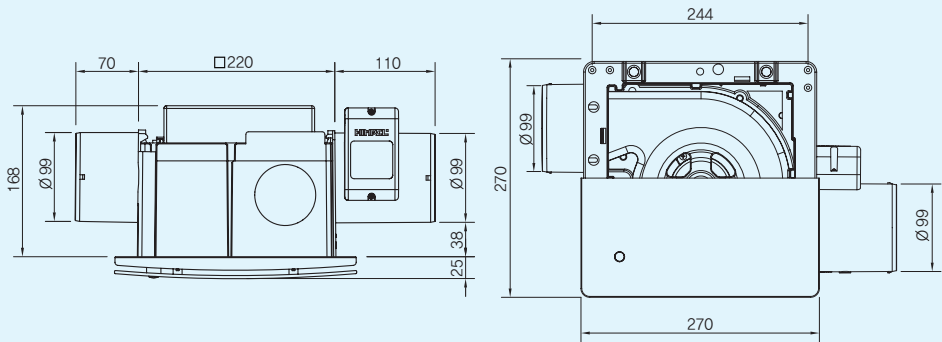


(MD)

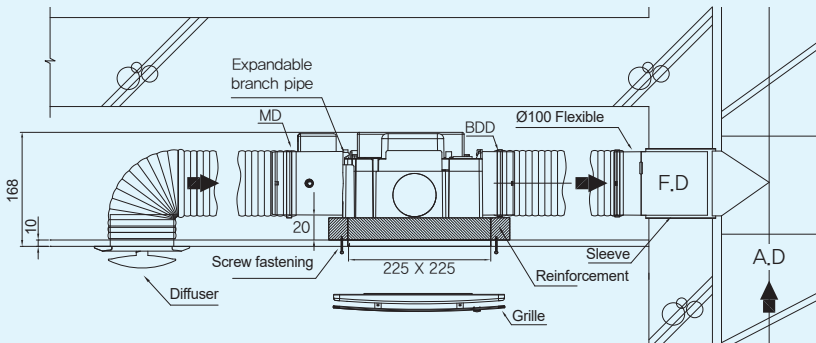
Grille



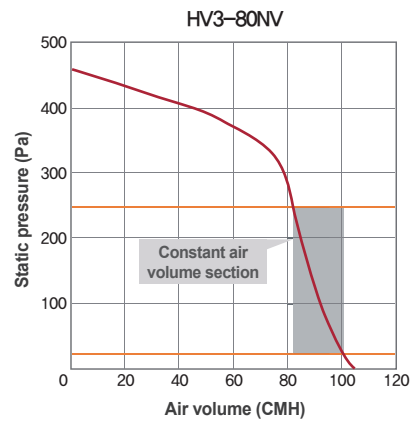
Product dimensions (unit: mm)



How to install the product



Performance



Remote control

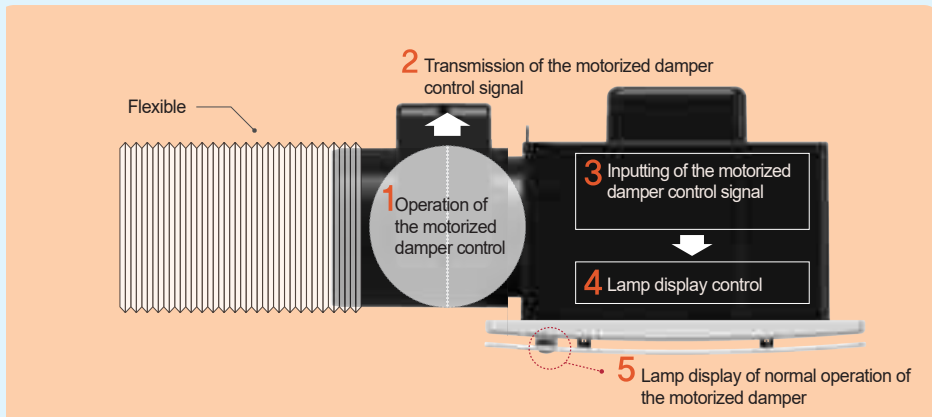


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HV3-80NV					
Static pressure (Pa)		25-250					
Air volume (CMH)		82-100					
Constant Air volume (CMH)		1st stage	56	2nd stage	78	3rd stage	91
Power consumption(W)			29		35		42
Noise (dB)			29		33		36
Product dimension (mm)		270(W) X 270(D) X 168(H)					
Weight (kg)		2.8					
Power		1Ø / 220V / 60Hz					
Option		FGrille, MGrille, Power lamp (L)					
Motorized damper (MD)	Power consumption(W)	3					
	Product dimension (mm)	Ø100 X 112L					
	Material	ABS					

CLEVER MD

Control configuration diagram



CLEVER MD

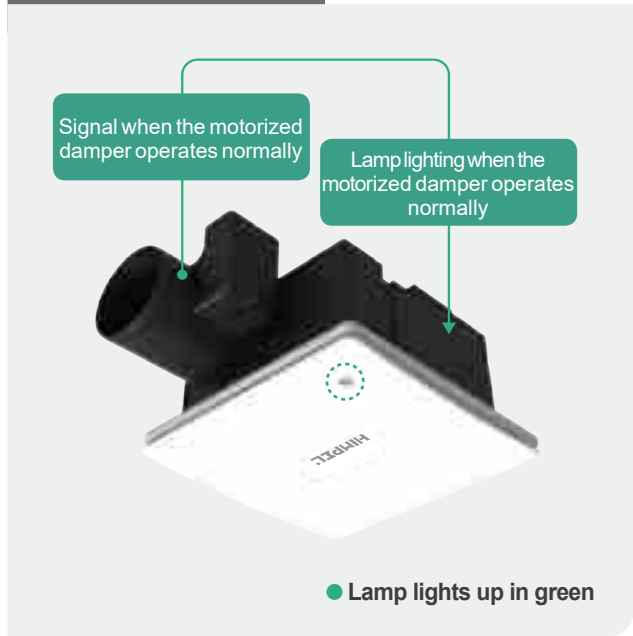
Duct diameter	Ø100
---------------	------

- Motorized damper
- Lamp displaying the operation of the motorized damper

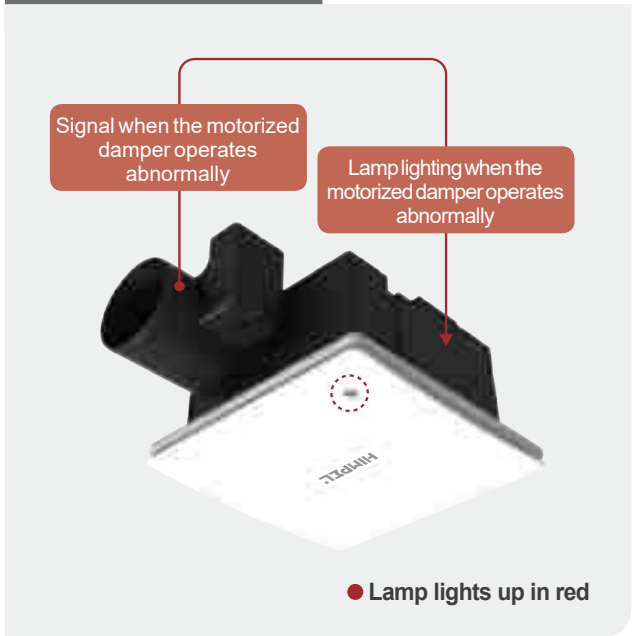
Lighting indication of the operation lamp

In case of failure or malfunction of the component motor or accessories of the motorized damper connected to the ventilation fan, or the case of damage to the connected wire, the information on whether the damper is operating abnormally through the operation indicator lamp in the ventilator grill is visually provided to increase the user's convenience.

Normal operation of the motorized damper



Abnormal operation of the motorized damper



Model		CLEVER MD
Motorized damper (MD)	Power consumption (W)	3
	Product dimension (mm)	Ø100 X 112L
	Material	ABS

ZEROC (Constant Air Volume, Multi Branch Type)



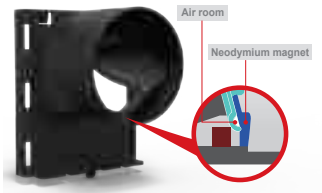
FZA-C110S

Housing dimension	235 X 235mm (±5mm)
Duct diameter	Ø100

- Certified as a bathroom ventilation fan with constant air volume
- Magnetic damper

Product damper

Magnetic damper



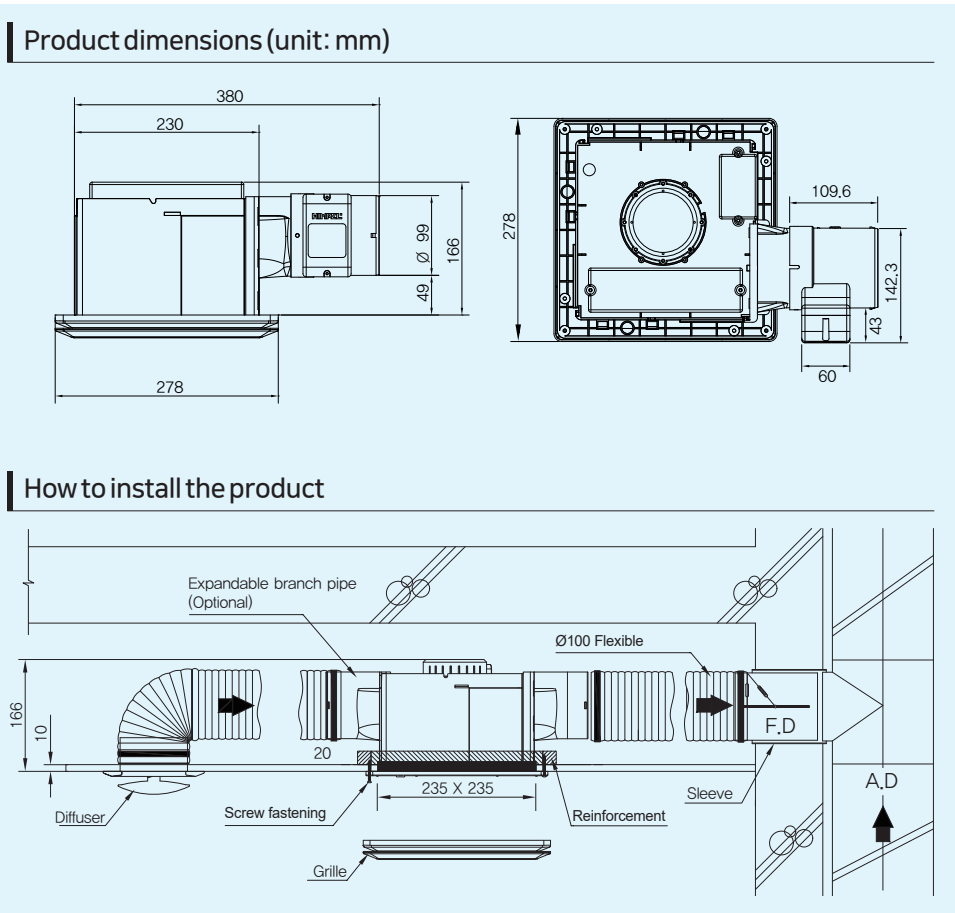
- ① Air tight structure
- ② Neodymium magnet structure to prevent back draft

Product damper(Optional)

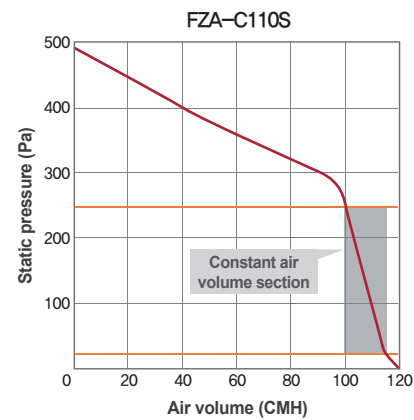
Motorized damper



〈MD〉



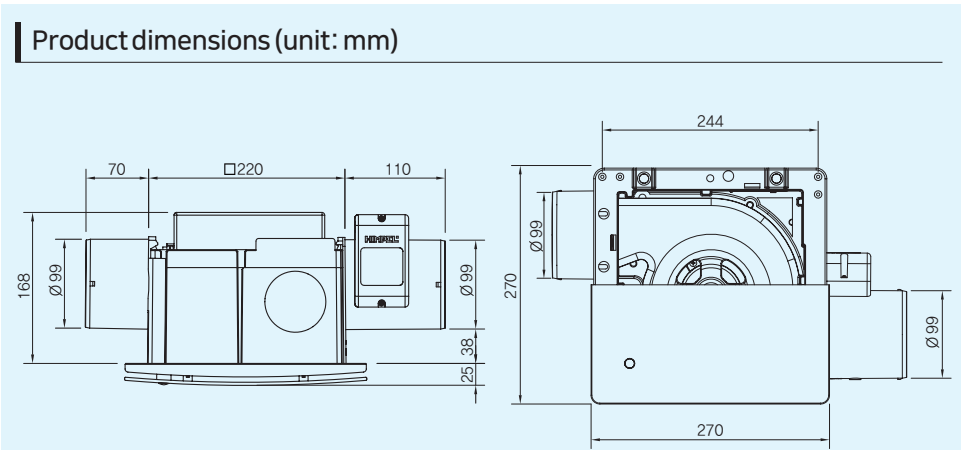
Performance



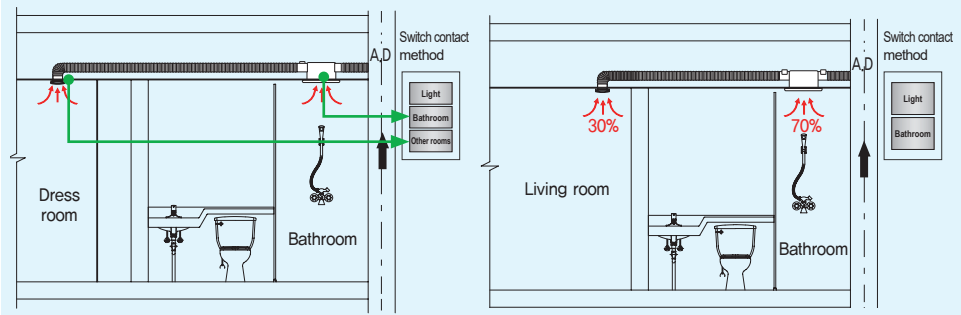
※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FZA-C110S
Static pressure (Pa)	25~250
Constant Air volume (CMH)	110
Air volume (CMH)	103~119
Power consumption (W)	45
Noise (dB)	38
Product dimension (mm)	278(W) X 278(D) X 166(H)
Weight (kg)	2.8
Power	1Ø / 220V / 60Hz

ZEROC (Constant Air Volume, Separate Room Ventilation Type)

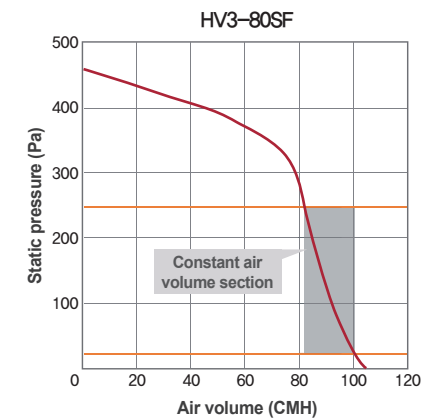


Control of each room in bathroom and other rooms

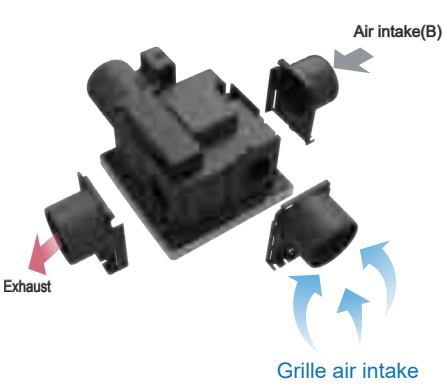


※The air volume ratio varies depending on the flexible installation condition.

Performance



Multi expandable branch (Optional)



HV3-80SF

Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- Low noise
- Various operation options
- Motorized damper
- Multi expandable branch
- Automatic air volume control (motor)

Product damper(Optional)

Motorized damper



〈MD〉

Grille



F Grille
Size 270(W) X 270(D)
Multi-expansion air volume control damper (Optional)
*Expanded intake and grille air volume ratio control

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		HV3-80SF
Static pressure (Pa)		25~250
Constant Air volume (CMH)		91
Air volume (CMH)		83~100
Power consumption(W)		36
Noise (dB)		37
Product dimension (mm)		270(W) X 270(D) X 168(H)
Weight (kg)		2.6
Power		1Ø / 220V / 60Hz
Option		Ventilation unit interlocking type, Power lamp (L)
Motorized damper (MD)	Power consumption (W)	3
	Product dimension (mm)	Ø100 X 112L
	Material	ABS

ZEROC(High Static Pressure)



HV3-100, HV3-120, HV3-150

Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- Low noise
- Magnetic damper
- Various operation options
- Multi expandable air volume control damper
- High/Low adjustment with switch (Optional)
- Multi expandable branch (Optional)



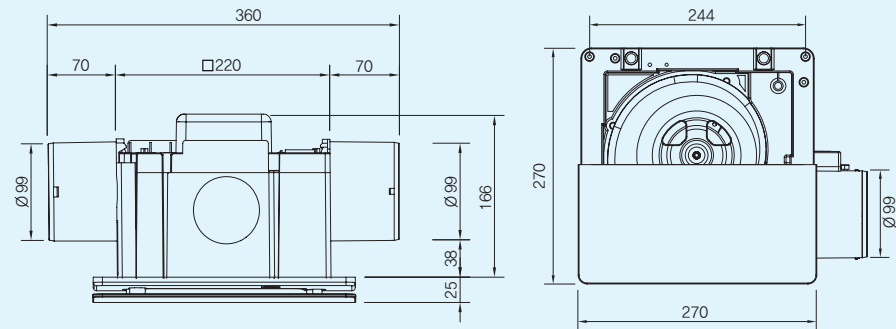
Product damper

Motorized damper

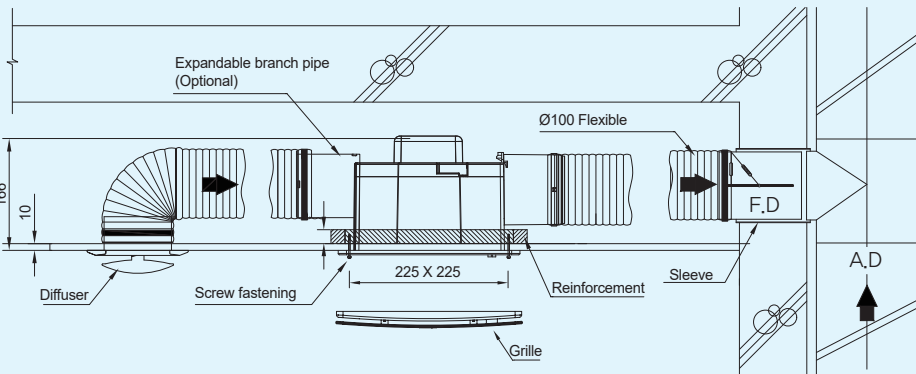


〈MD-N〉

Product dimensions (unit: mm)



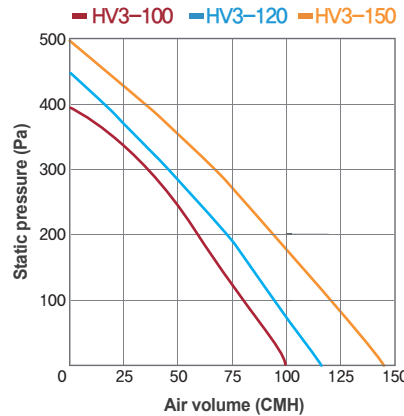
How to install the product



Grille



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	HV3-100			HV3-120			HV3-150		
Static pressure (Pa)	0	100	200	0	100	200	0	100	200
Air volume (CMH)	100	80	60	120	90	70	145	120	90
Power consumption (W)	27			31			39		
Noise (dB)	37			40			44		
Product dimension (mm)	Basic type : 270(W) X 270(D) X 166(H)								
Weight (kg)	2.4								
Power	1Ø / 220V / 60Hz								
Option	F grille, M grille, power lamp (L), Multi expandable branch, Multi expandable air volume control damper, High/low control switch								
Operation	H (humidity type), T (timer type), V (ventilation unit interlocking type), HT (humidity, timer type)								

High/Low control switch (Optional)

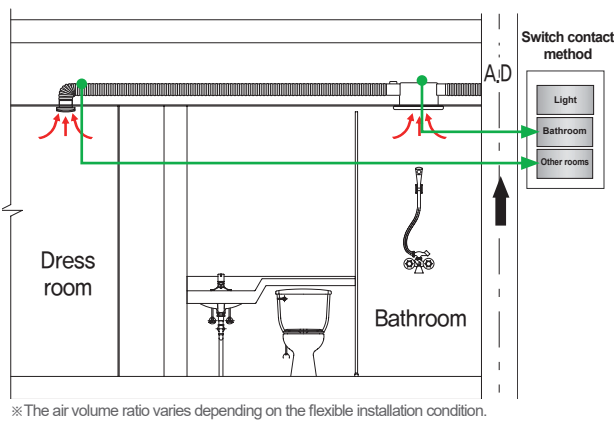
High/Low control of the air volume is possible using a switch.



Products with high/low control switch

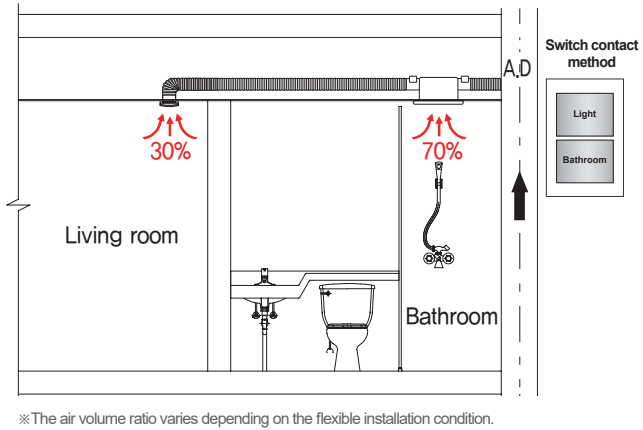
ZEROC	HV3-100	HV3-120	HV3-150
LIVO	L2-100	L2-120	L2-150

Control of each room in bathroom and other rooms



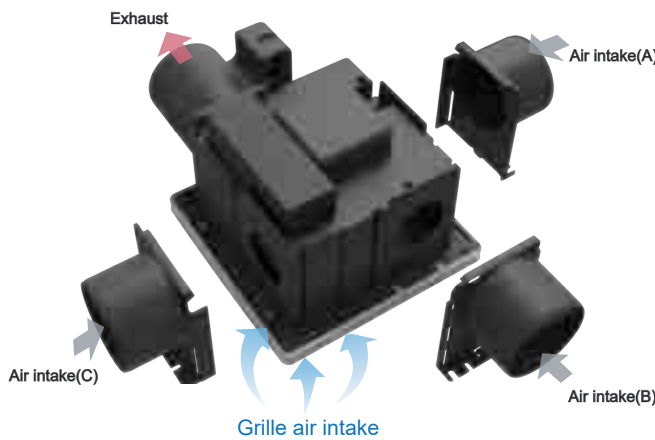
※ The air volume ratio varies depending on the flexible installation condition.

Interlocking control of bathroom and ventilation unit (ERV, floor ventilation)



※ The air volume ratio varies depending on the flexible installation condition.

Multi expandable branch (Optional)



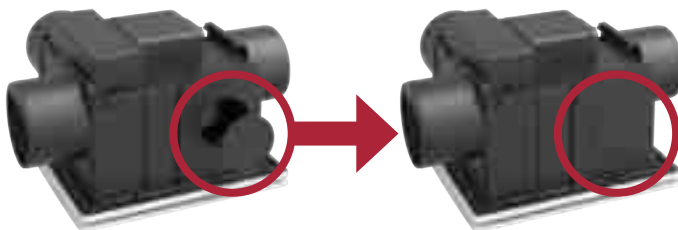
Air volume ratio by branch(%)

Branch	4 Branches
Grille Air volume	70 %
Expandable branch Air volume	30 %

※ The standard is within 2.0m of flexible, depending on the installation condition.
※ The branch direction can be adjusted freely

Blind Cap

Possible to set the desired branch direction and number by applying a blind cap



Multi expandable air volume control damper (Optional)

Expandable air intake and grill air volume ratio control



CYFLREX (LED Light Type)



FFA-80L

Housing dimension	165 X 165mm (±5mm)
Duct diameter	Ø100

- High-end ventilation fan with complex type lighting
- Magnetic damper
- Low power LED applied



Product damper(Optional)

Motorized damper



〈MD〉

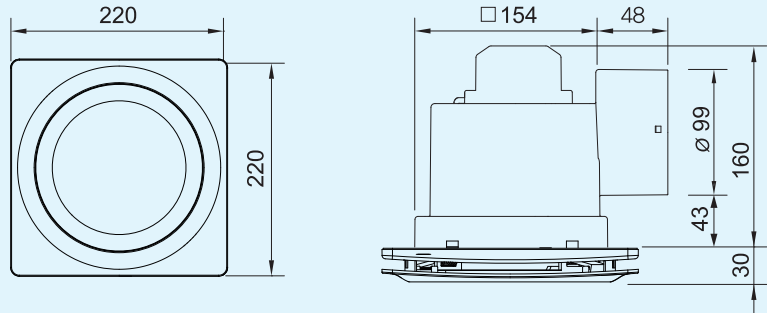
Grille



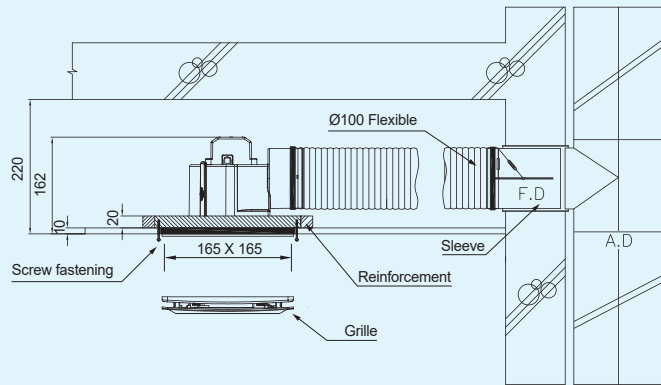
LED light ON LED light OFF

Size 278(W) X 278(D)

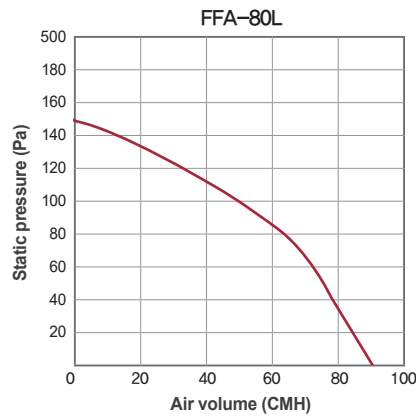
Product dimensions (unit: mm)



How to install the product



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FFA-80L
Air volume (CMH)	90
Power consumption (W)	Ventilation fan : 23 / LED light : 12W
Noise (dB)	38
Intensity of illumination (Lumen)	800
Product dimension (mm)	220(W) X 220(D) X 160(H)
Weight (kg)	1.6
Power	1Ø / 220V / 50Hz
Option	-

ZEROC (LED Light Type)



FZA-L110S1

Housing dimension	235 X 235mm (±5mm)
Duct diameter	Ø100

- High-end ventilation fan with complex type lighting
- Magnetic damper
- Multi expandable branch
- Low power LED applied



Product damper(Optional)

Motorized damper



〈MD〉

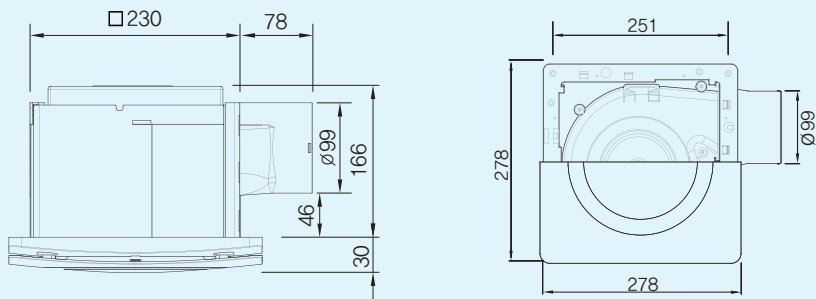
Grille



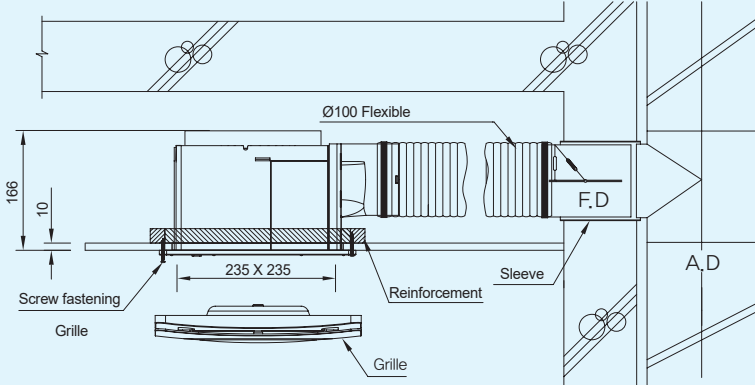
LED light ON LED light OFF

Size 278(W) X 278(D)

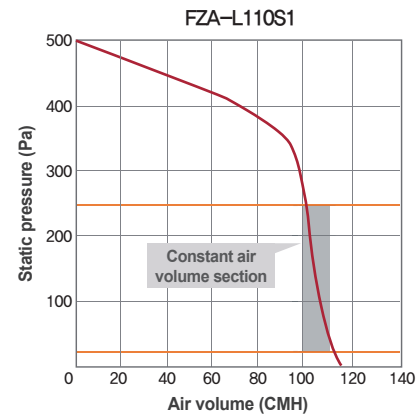
Product dimensions (unit: mm)



How to install the product



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FZA-L110S1
Static pressure (Pa)	25~250
Constant Air volume (CMH)	110
Air volume (CMH)	103~119
Power consumption(W)	Ventilation fan : 40 / LED light : 9
Noise (dB)	39
Illuminance (Lux)	130~150
Product dimension (mm)	278(W) X 278(D) X 166(H)
Weight (kg)	3
Power	1Ø / 220V / 60Hz
Option	Multi expandable branch , Motorized damper



Installation example | MODEL. FZA-L110S1

ZEROC (LED Light Type)



FZD-L80S / HV3-81JG

Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- High static pressure, constant air volume
- Ventilation fan with complex type lighting
- Gravity damper
- Multi expandable branch
- Low power LED application
- Certified as Good Design (GD)

Product damper

Motorized damper



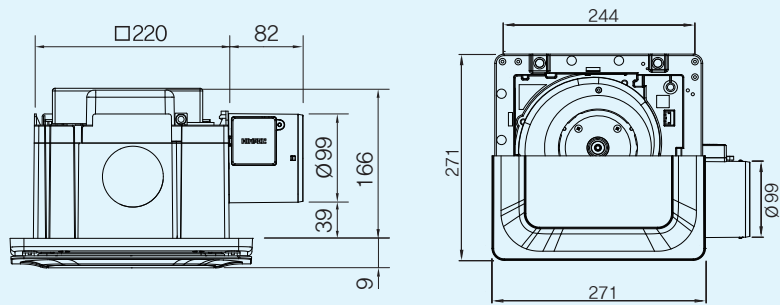
〈MD-N〉

Grille

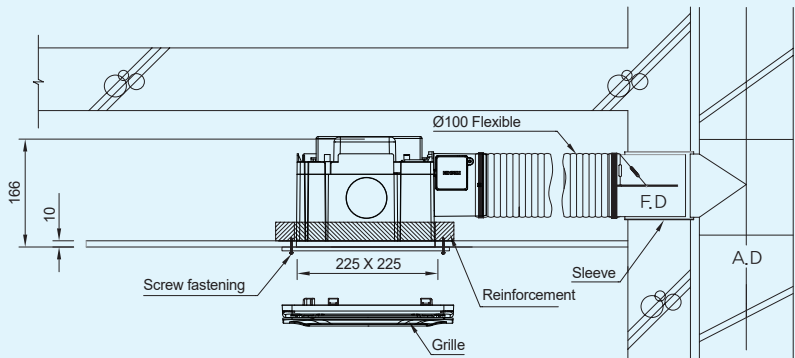


HV3-81JG Grille
Size 275(W) X 275(D)
FZD-L80S Grille
Size 271(W) X 271(D)

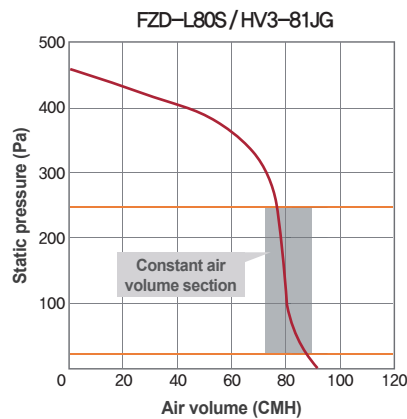
Product dimensions (unit: mm)



How to install the product



Performance



Installation example | MODEL. FZD-L80S

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FZD-L80S	HV3-81JG
Static pressure (Pa)	25~250	
Constant Air volume (CMH)	83	
Air volume (CMH)	75~91	
Power consumption(W)	Ventilation fan : 38 / LED light : 12	
Noise (dB)	39	
Illuminance (Lux)	130~150	
Product dimension (mm)	271(W) X 271(D) X 166(H)	275(W) X 275(D) X 166(H)
Weight (kg)	2.6	
Power	1Ø / 220V / 60Hz	
Option	-	Power lamp (L)

ZEROC (Constant Air Volume, Slim Type)



FZA-C80

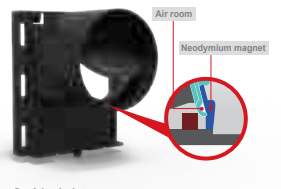
Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- Certified as a bathroom ventilation fan with constant air volume
- Slim type
- Two-room expandable exhaust function
- Magnetic damper



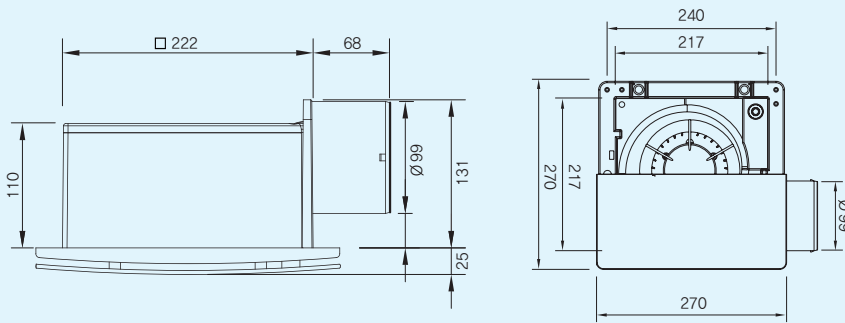
Product damper

Magnetic damper

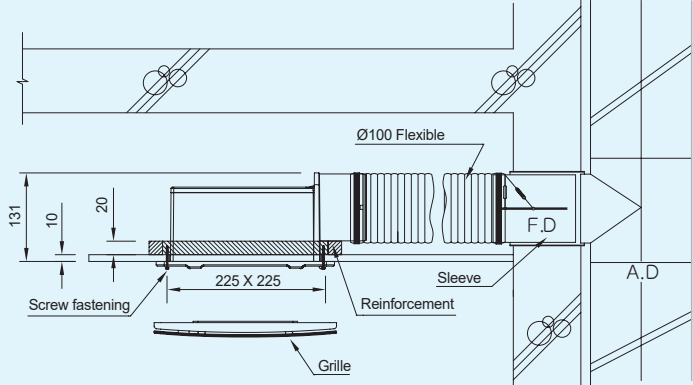


- ① Air tight structure
- ② Neodymium magnet structure to prevent back draft

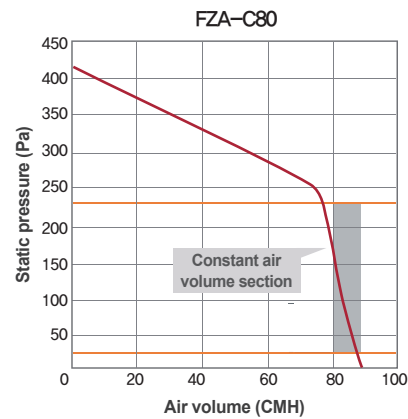
Product dimensions (unit: mm)



How to install the product



Performance



Grille



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FZA-C80
Static pressure (Pa)	25~250
Constant Air volume (CMH)	84.5
Air volume (CMH)	79~90
Power consumption(W)	34
Noise (dB)	36
Product dimension (mm)	270(W) X 270(D) X 131(H)
Weight (kg)	2.1
Power	1Ø / 220V / 60Hz
Option	F Grille, M Grille

ZEROC (Constant Air Volume, MD Integrated Type)



FZA-C90SM

Housing dimension	225 X 225mm (±5mm)
Duct diameter	Ø100

- Certified as a bathroom ventilation fan with constant air volume
- Low noise
- Various operation options
- Motorized damper
- Multi expandable branch

Product damper

Motorized damper

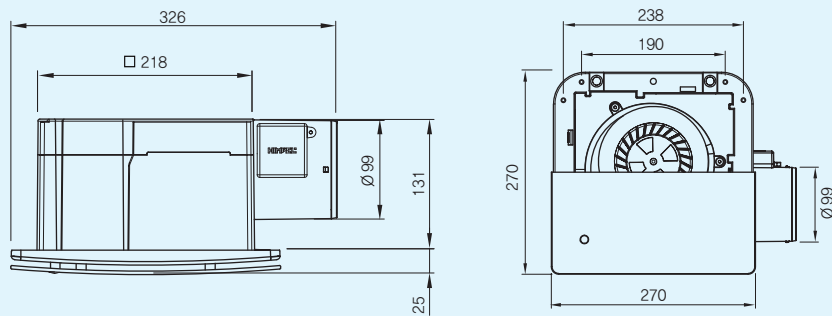


◀MD-N▶

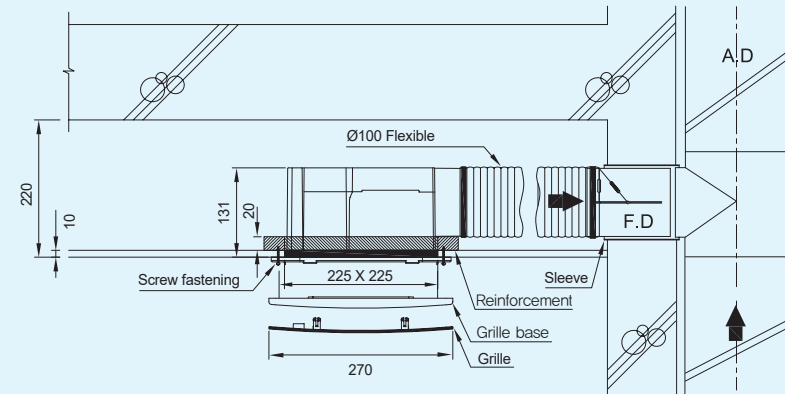
Grille



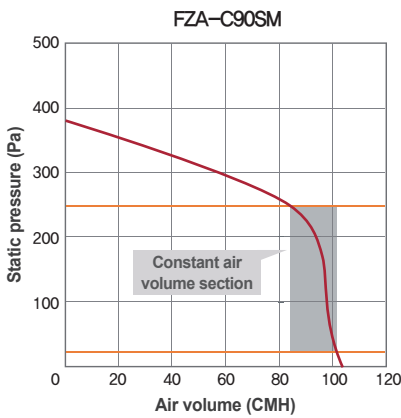
Product dimensions (unit: mm)



How to install the product



Performance

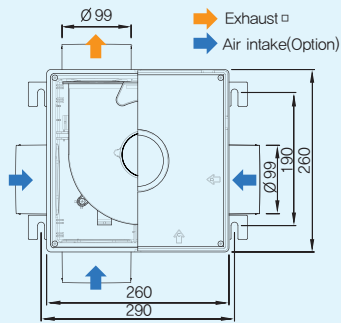


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		FZA-C90SM
Static pressure (Pa)		25~250
Constant air volume (CMH)		92.7
Air volume (CMH)		83~102
Power consumption (W)		35
Noise (dB)		38
Product dimension (mm)		270(W) X 270(D) X 131(H)
Weight (kg)		2.4
Power		1Ø / 220V / 60Hz
Option		FGrille, SMGrille, Power lamp (L), Multi expandable branch
Motorized damper (MD-N)	Power consumption (W)	2.5
	Product dimension (mm)	Ø100 X 101L
	Material	ABS

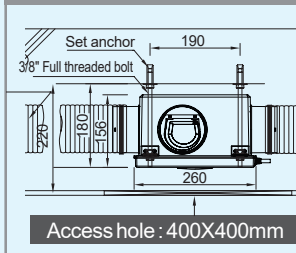
LIVO (BLDC)

Product dimensions (unit: mm)

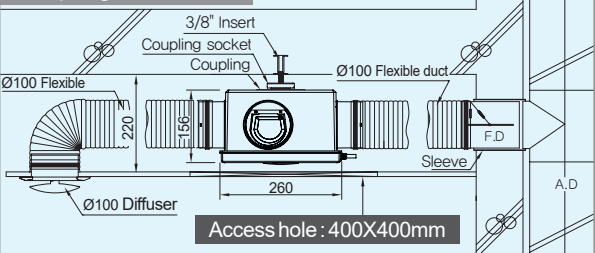


How to install the product

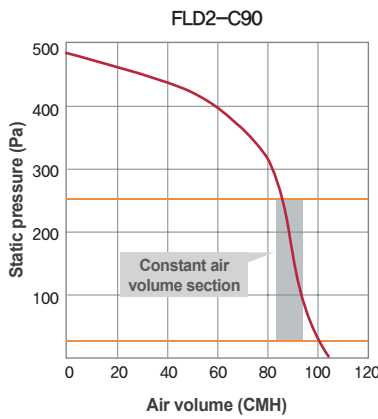
Full threaded bolt installation



Coupling installation



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model		FLD2-C90
Static pressure (Pa)		25~250
Constant air volume (CMH)		90
Air volume (CMH)		81~99
Power consumption (W)		10
Noise (dB)		38
Product dimension (mm)		260(W) x 260(D) x 160(H)
Weight (kg)		2.2
Power		1Ø / 220V / 60Hz
Option		Multi expandable branch, High/low control switch



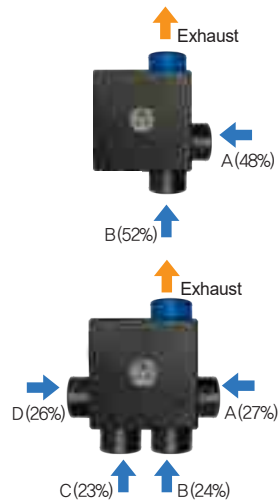
FLD2-C90

Duct diameter	Ø100
---------------	------

- BLDC Fan-Motor (high efficiency / low noise)
- In-line (embedded ceiling type)
- Gravity damper
- Multi expandable branch

Air volume ratio by branch

※ The standard is within 2.0m of flexible, depending on the installation condition.



LIVO (High Static Pressure)



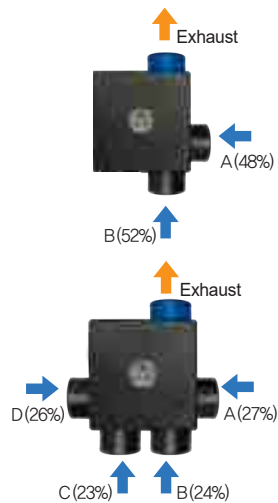
L2-100, L2-120, L2-150
FLA-C90

Duct diameter Ø100

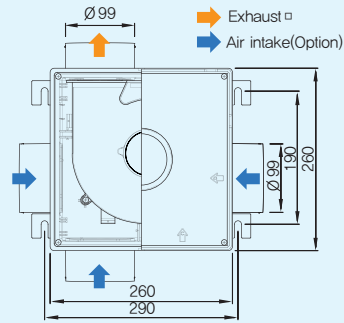
- Certified as a bathroom ventilation fan with constant air volume (FLA-C90)
- High static pressure low noise
- In-line (embedded ceiling type)
- Various operation options
- Gravity damper
- Multi expandable branch

Air volume ratio by branch

※ The standard is within 2.0m of flexible, depending on the installation condition.

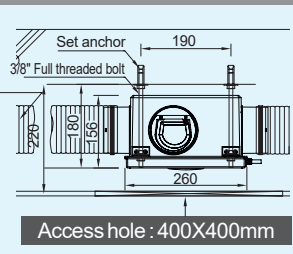


Product dimensions (unit: mm)

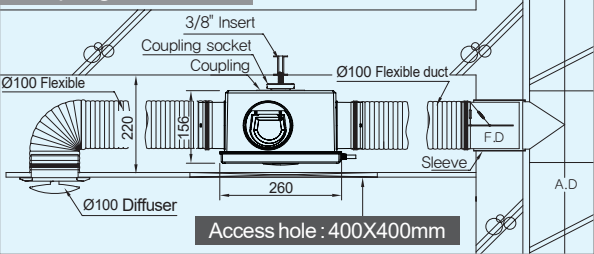


How to install the product

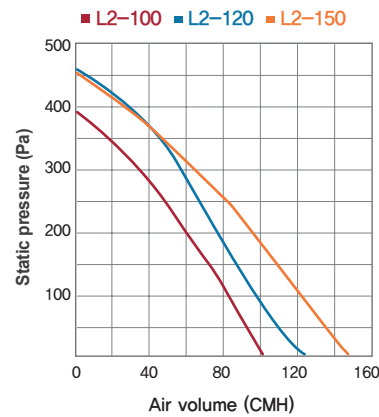
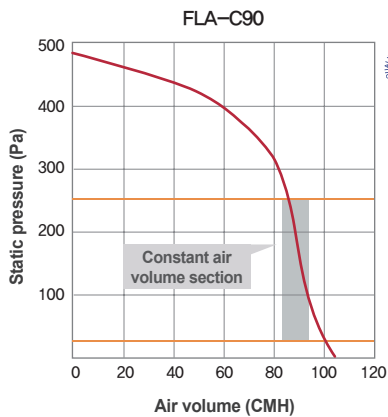
Full threaded bolt installation



Coupling installation



Performance

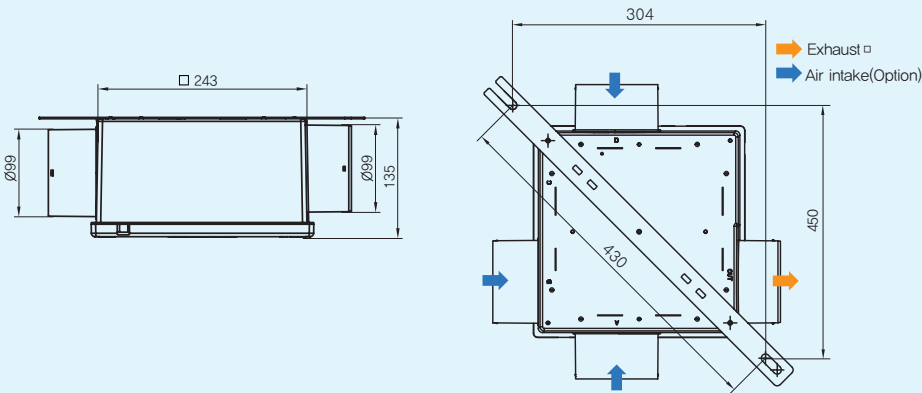


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FLA-C90(Constant air volume)	L2-100			L2-120			L2-150		
Static pressure (Pa)	25~250	0	100	200	0	100	200	0	100	200
Constant air volume (CMH)	90	—								
Air volume (CMH)	83~97	100	80	60	120	90	70	150	120	90
Power consumption (W)	34	27			31			39		
Noise (dB)	38	35			40			44		
Product dimension (mm)	260(W) X 260(D) X 160(H)									
Weight (kg)	2.2									
Power	1 Ø / 220V / 60Hz									
Operation Option	—	V (Ventilation unit interlocking type), U(High/low 2-stage)								
Option	Multi expandable branch, High/low control switch, high/Medium/Low control room control									

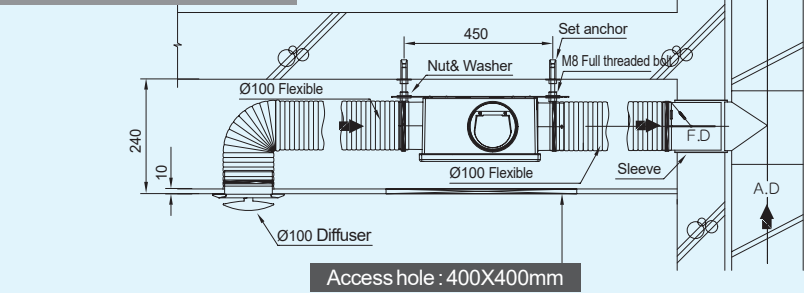
LIVO (Constant Air Volume, Slim Type)

Product dimensions (unit: mm)

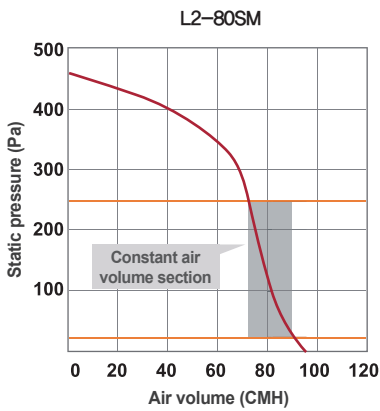


How to install the product

Full threaded bolt installation

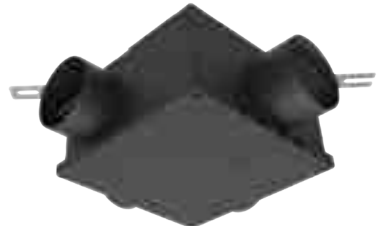


Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	L2-80SM
Static pressure (Pa)	25~250
Air volume (CMH)	82
Power consumption (W)	38
Noise (dB)	36
Product dimension (mm)	254(W) X 254(D) X 135(H)
Weight (kg)	2.2
Power	1 Ø / 220V / 60Hz
Option	Multi expandable branch



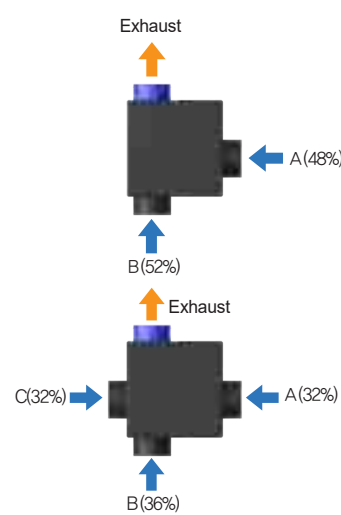
L2-80SM

Duct diameter Ø100

- High static pressure, constant air volume, low noise
- In-line (embedded ceiling type)
- Gravity damper
- Multi expandable branch

Air volume ratio by branch

※ The standard is within 2.0m of flexible, depending on the installation condition.



LIVO (High Static Pressure, High Air Volume)



L2-250, L2-300

Connection duct Supply air : Ø100
Exhaust air: Ø125

- High static pressure, high air volume, low noise
- In-line (embedded ceiling type)
- Gravity damper
- Multi expandable branch
- Possible to select the inlet direction and number

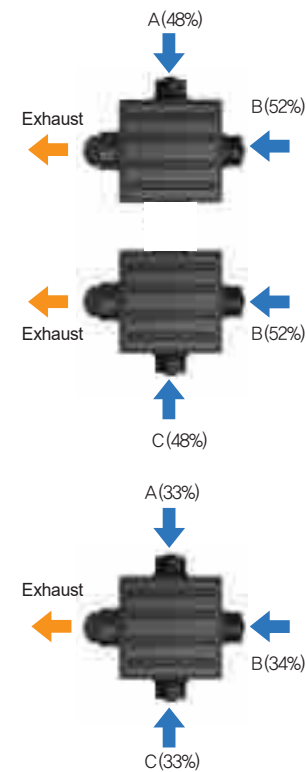
Remote control (Optional)



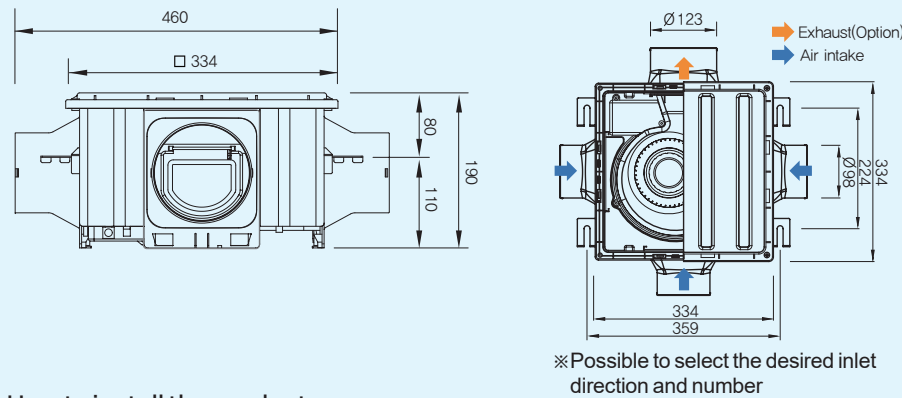
HRC-30
Wired control

Air volume ratio by branch

※ The standard is within 2.0m of flexible, depending on the installation condition.

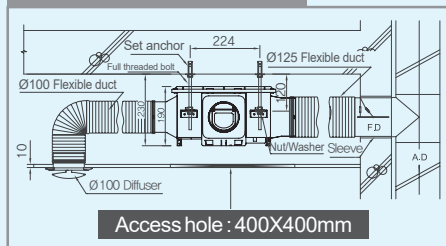


Product dimensions (unit: mm)

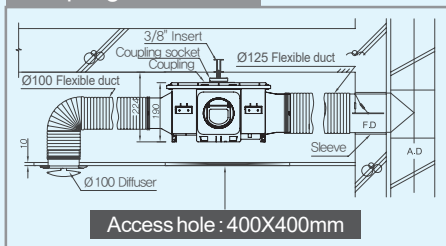


How to install the product

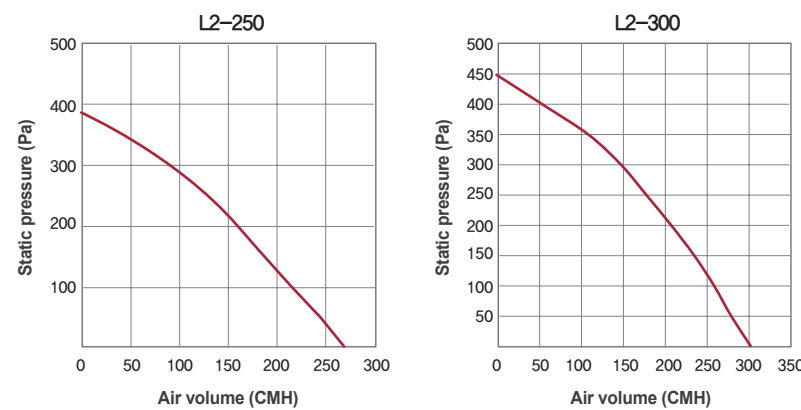
Full threaded bolt installation



Coupling installation



Performance

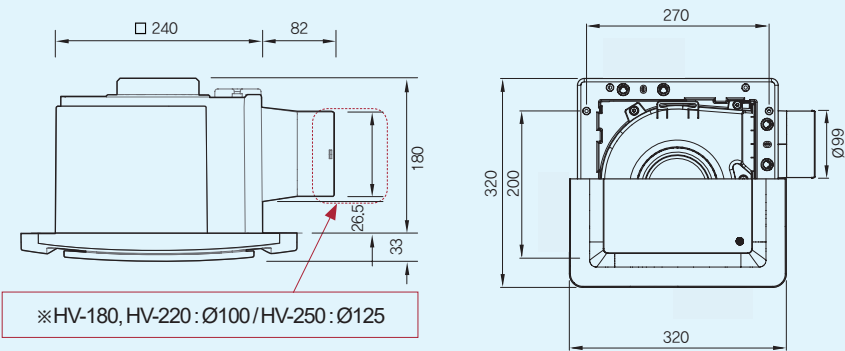


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

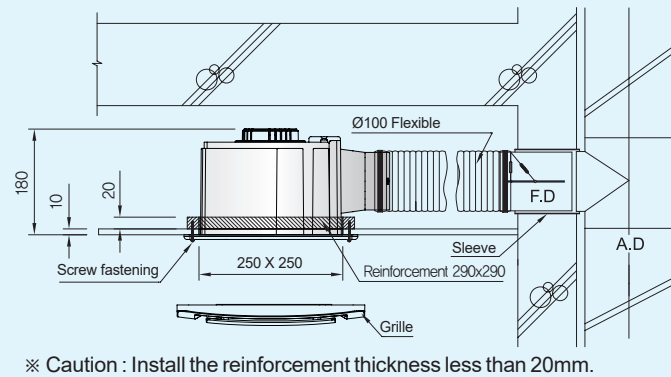
Model	L2-250			L2-300		
Static pressure (Pa)	0	100	200	0	100	200
Air volume (CMH)	250	205	155	300	250	200
Power consumption (W)	68			84		
Noise (dB)	46			49		
Product dimension (mm)	334(W) X 334(D) X 190(H)					
Weight (kg)	3.2					
Power	1Ø / 220V / 60Hz					
Option	Multi expandable branch, High/medium/low control room control					

ZAION (High Air Volume)

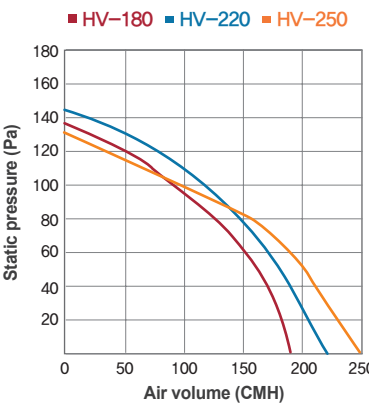
Product dimensions (unit: mm)



How to install the product



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	HV-180	HV-220	HV-250
Air volume (CMH)	180	220	250
Power consumption (W)	30	33	39
Noise (dB)	36	40	46
Product dimension (mm)	320(W) X 320(D) X 180(H)		
Weight (kg)	2.7		
Power	1Ø / 220V / 60Hz		
Option	Power lamp (L)		



HV-180, HV-220, HV-250

Housing dimension 250 X 250mm (±5mm)

Duct diameter • HV-180 : Ø100
• HV-220 : Ø100
• HV-250 : Ø125

- High air volume
- Low noise
- Gravity type damper



Product damper (Optional)

Motorized damper



(MD)

Grille



Basic Grille

Size 320(W) X 320(D)

FLREX (Medium Static Pressure)



C2-100

Housing dimension	165 X 165mm (±5mm)
Duct diameter	Ø100

- Low noise
- Gravity type damper



Product damper(Optional)

Motorized damper



〈MD〉

Grille



M Grille

Size 205(W) X 205(D)



F Grille

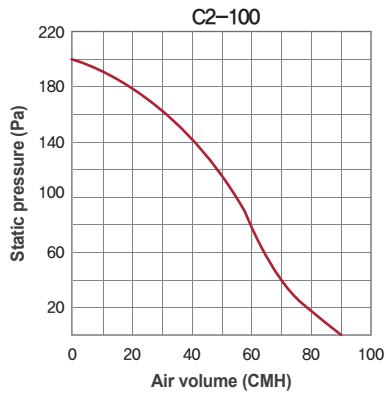
Size 205(W) X 205(D)



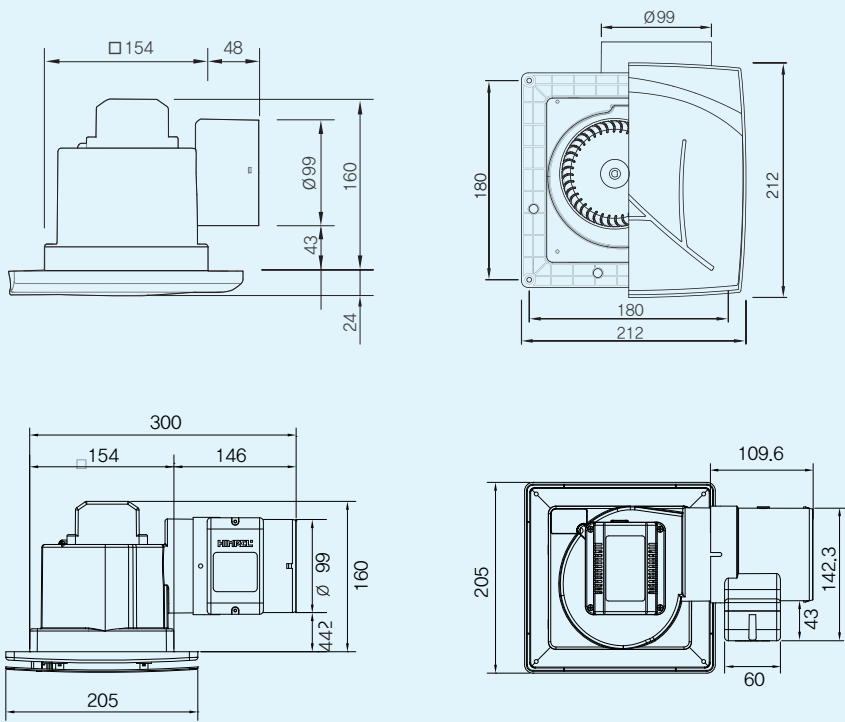
L Grille (White)

Size 212(W) X 212(D)

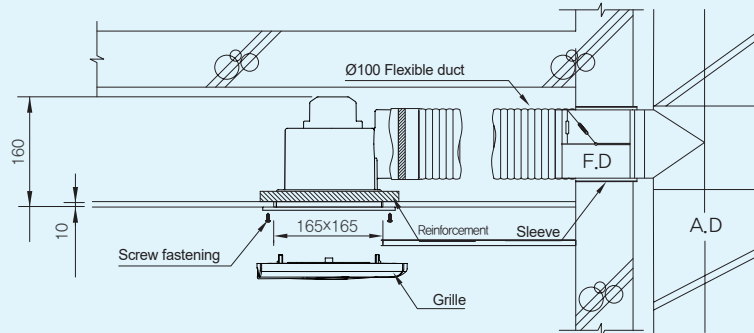
Performance



Product dimensions (unit: mm)



How to install the product

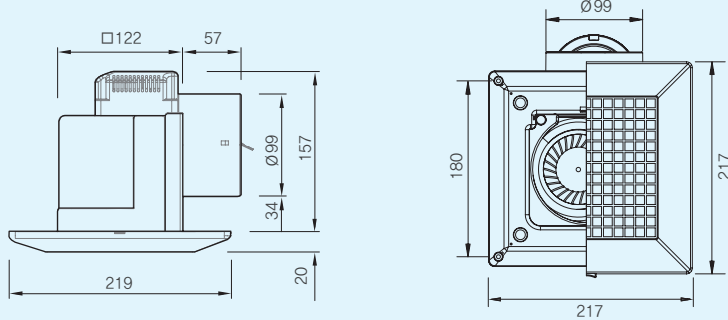


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

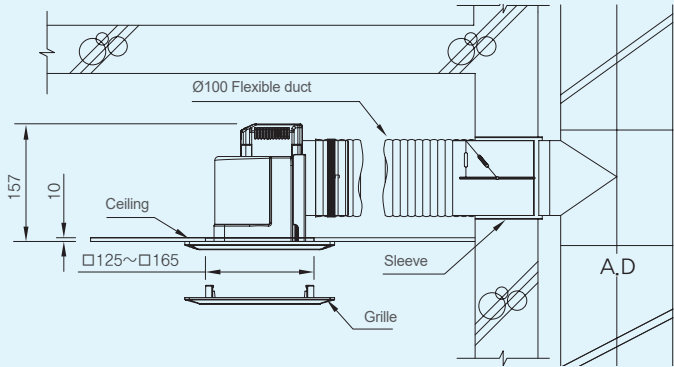
Model	C2-100
Air volume (CMH)	90
Power consumption (W)	22
Noise (dB)	38
Product dimension (mm)	205(W) X 205(D) X 160(H)
Weight (kg)	1.4
Power	1Ø / 220V / 60Hz
Option	Power lamp (L)

TURBO 747 (Low Static Pressure)

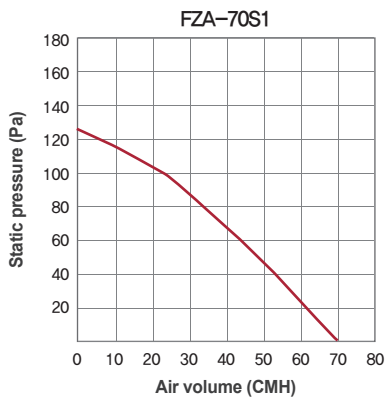
Product dimensions (unit: mm)



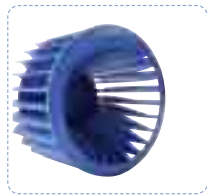
How to install the product



Performance

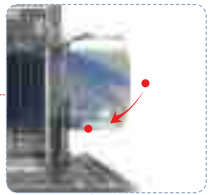


Feature



Jet turbo impeller

High performance and low noise by optimal airflow design



Backflow prevention magnetic damper

Preventing odors coming from outside by applying neodymium magnetic damper

Free installation hole compatibility

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FZA-70S1
Air volume (CMH)	70
Power consumption (W)	16.5
Noise (dB)	37
Product dimension (mm)	219(W) X 219(D) X 157(H)
Weight (kg)	1.2
Power	1Ø / 220V / 60Hz
Option	-

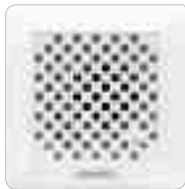
FZA-70S1

Housing dimension	□125~□165mm
Duct diameter	Ø100

- Jet turbo impeller
- Magnetic damper
- Free installation perforation (□125~□165)



Grille



Basic Grille

Size 219(W) X 219(D)

CYCLONE (Low Static Pressure)



JV-201

Housing dimension	160 X 160mm (±5mm)
Duct diameter	Ø100

- Low noise
- Gravity type damper



Product damper(Optional)

Motorized damper



〈MD〉

Grille



M Grille

Size 205(W) X 205(D)



C Grille

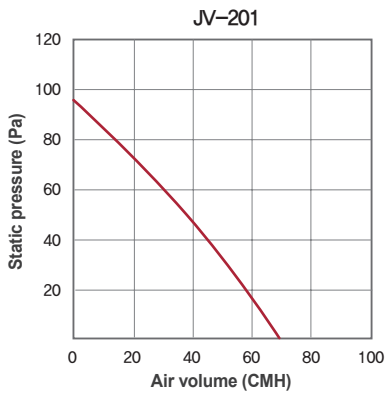
Size 195(W) X 225(D)



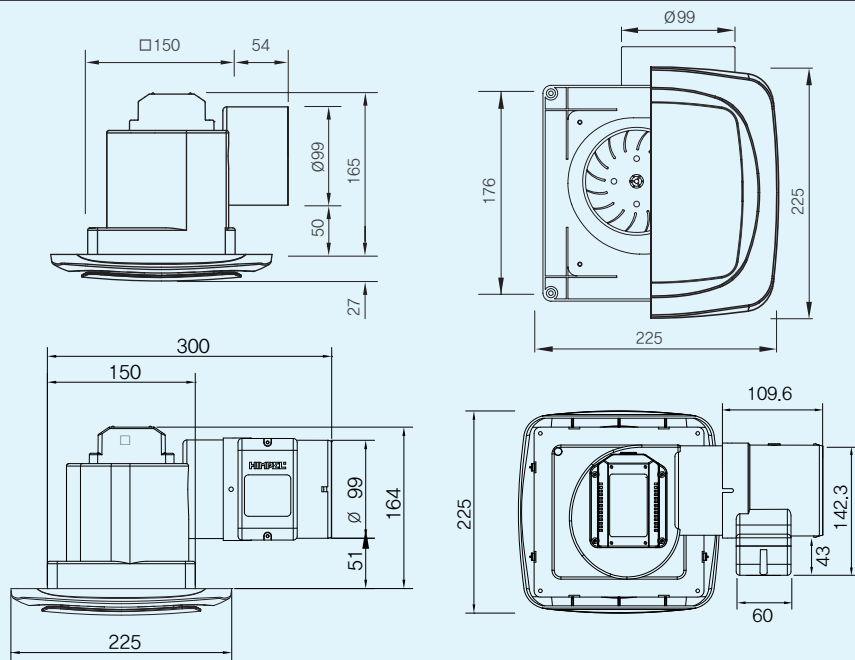
S Grille

Size 225(W) X 225(D)

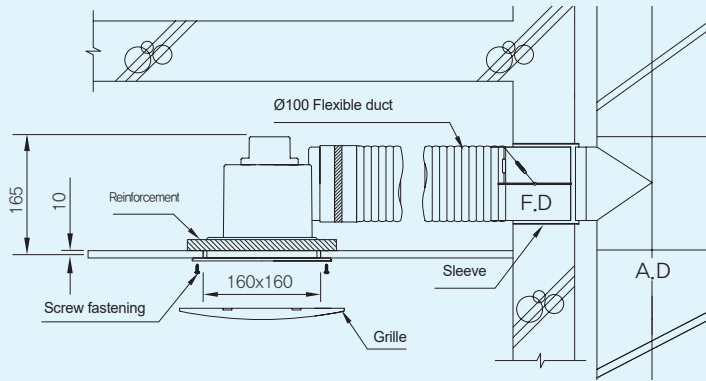
Performance



Product dimensions (unit: mm)



How to install the product

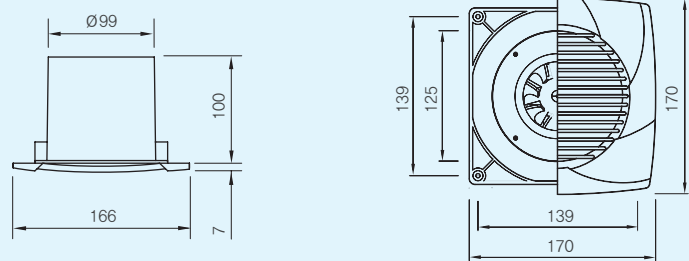


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

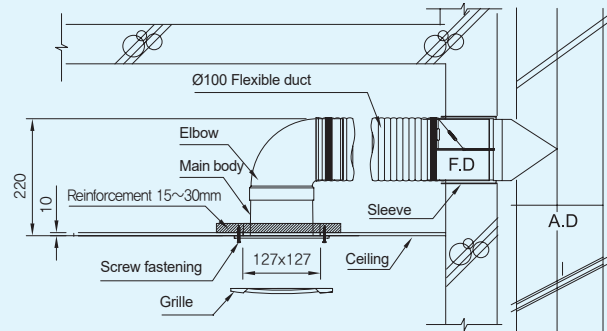
Model	JV-201
Air volume (CMH)	65
Power consumption (W)	12
Noise (dB)	34
Product dimension (mm)	205(W) X 205(D) X 165(H)
Weight (kg)	0.9
Power	1Ø / 220V / 60Hz
Option	M Grille, C Grille, S Grille

TURBO FAN (Low Static Pressure)

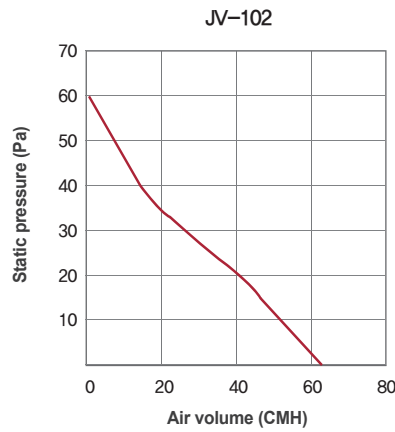
Product dimensions (unit: mm)



How to install the product



Performance



JV-102

Housing dimension	127 X 127mm (±5mm)
Duct diameter	Ø100

- Axial flow type turbo fan

Grille



Basic Grille

Size 170(W) X 170(D)

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

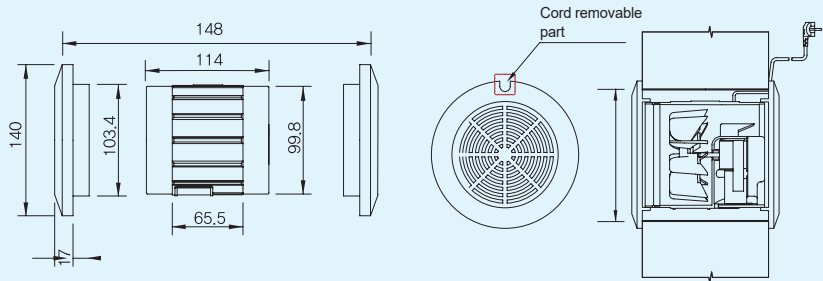
Model	JV-102
Air volume (CMH)	60
Power consumption (W)	10
Noise (dB)	38
Product dimension (mm)	170(W) X 170(D) X 100(H)
Weight (kg)	0.72
Power	1Ø / 220V / 60Hz
Option	Elbow

PIPE FAN (Low Static Pressure)

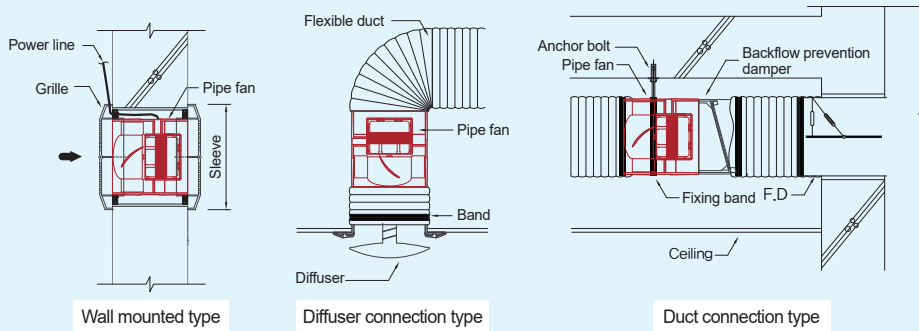


- Multipurpose pipe fan
- Multi-purpose installation possible such as wall mounted, ceiling, etc.

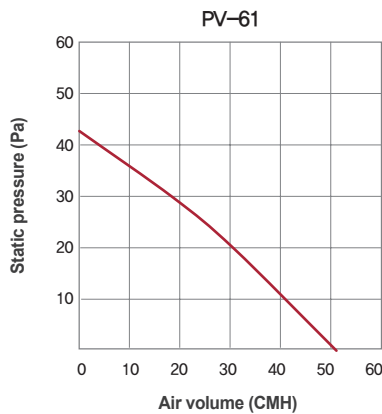
Product dimensions (unit: mm)



Use example



Performance

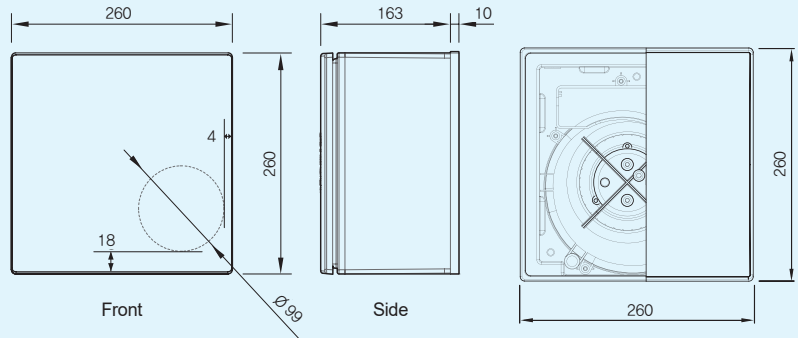


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

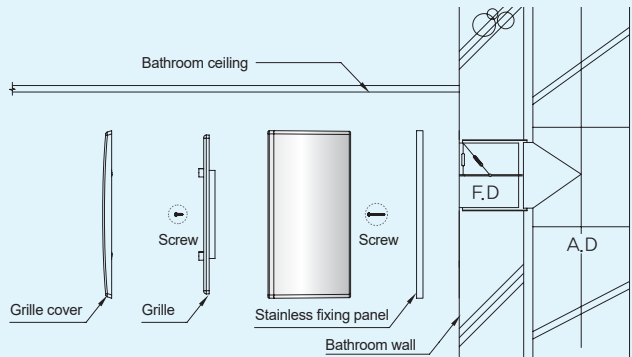
Model	PV-61
Air volume (CMH)	50
Power consumption (W)	10
Noise (dB)	33
Product dimension (mm)	140(W) X 140(D) X 148(H)
Weight (kg)	0.64
Power	1Ø / 220V / 60Hz

ZEROC (Wall Mounted Type)

Product dimensions (unit: mm)



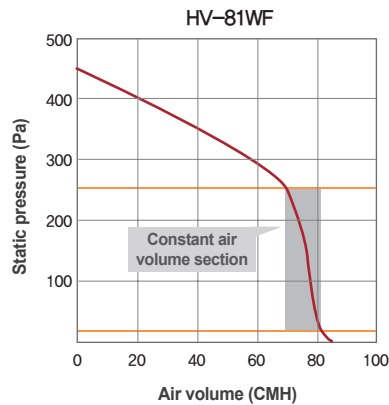
How to install the product



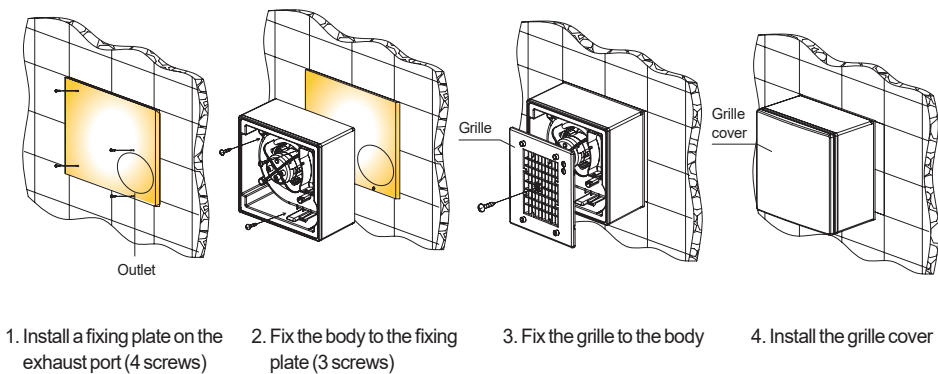
HV-81WF

- High static pressure
- Wall-mounted installation
- Easy installation (360° rotation 4-way installation possible)

Performance



Grille Installation

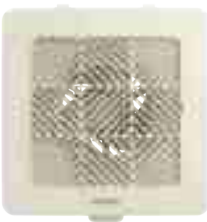


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	HV-81WF(Wall mounted type)
Static pressure (Pa)	25~250
Constant air volume (CMH)	75
Air volume (CMH)	68~83
Power consumption (W)	31
Noise (dB)	39
Product dimension (mm)	260(W) X 260(D) X 163(H)
Weight (kg)	3.3

Ventilation Fan (Wall Mounted Type)

FWA-R125D100

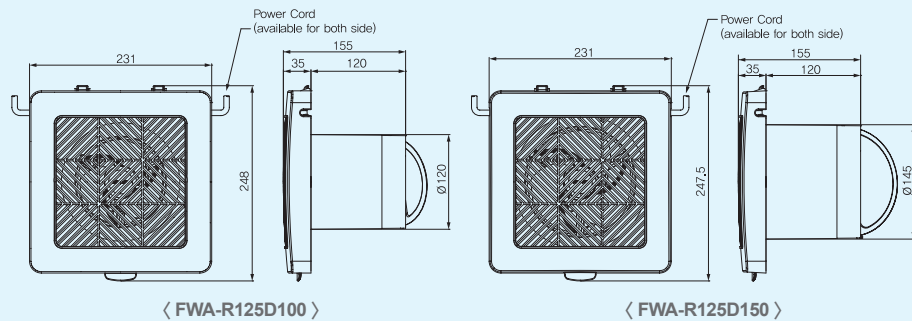


FWA-R125D150

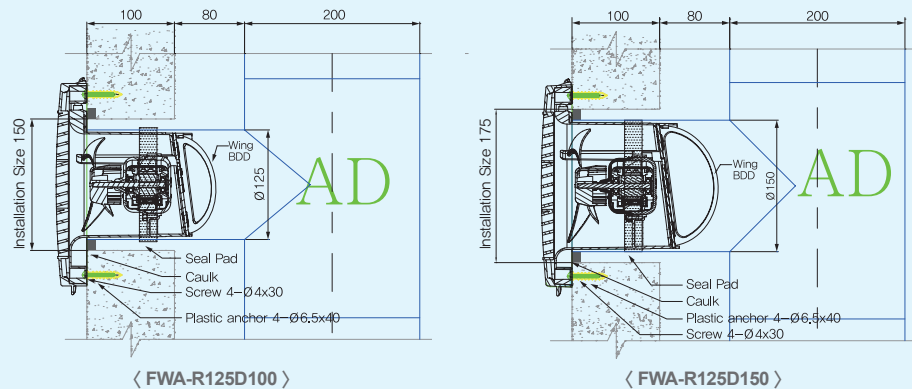
- Damper preventing back flow
- Low power consumption low noise
- Easy installation
- Simple and luxurious design
- Duct type



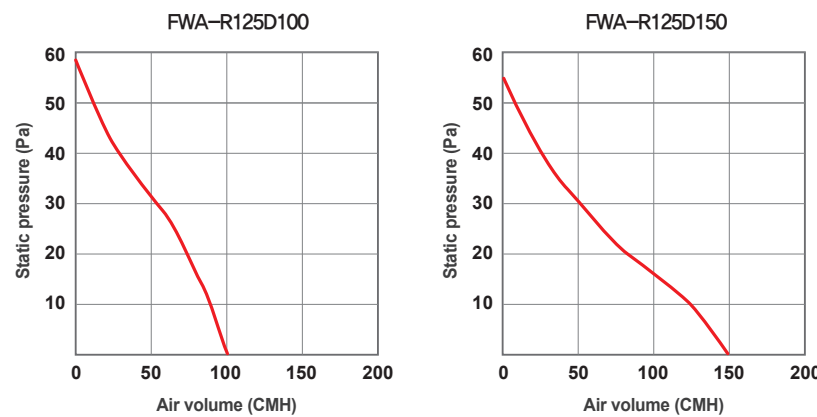
Product dimensions (unit: mm)



How to install the product



Performance

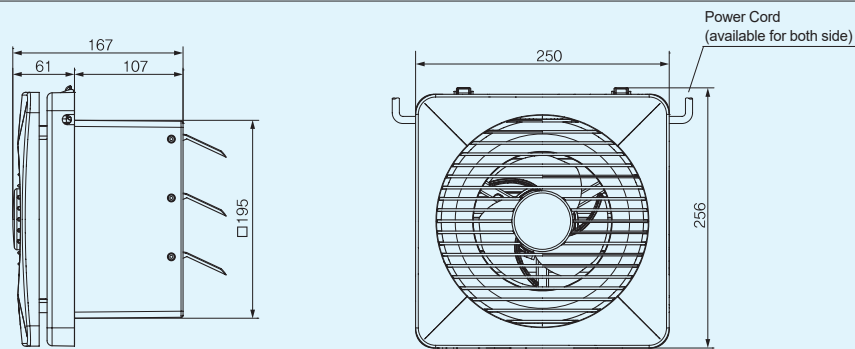


※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

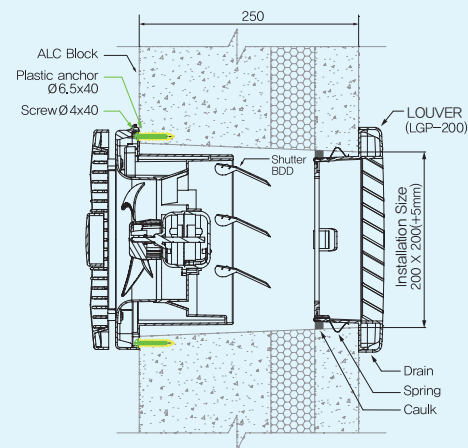
MODEL	FWA-R125D100	FWA-R125D150
Static Pressure (Pa)	59	55
Air Volume (CMH)	100 (58.9CFM)	150 (88.3CFM)
Power Consumption (W)	22	25
Noise (dB)	45	45
Product dimension (mm)	231(W) x 155(D) x 248(H)	231(W) x 155(D) x 248(H)
Weight (kg)	1.1kg	1.1kg

Ventilation Fan (Wall Mounted Type)

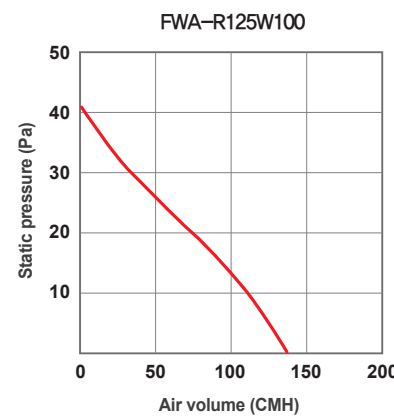
Product dimensions (unit: mm)



How to install the product



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

MODEL	FWA-R125W100
Static Pressure (Pa)	41
Air Volume (CMH)	140 (82.4CFM)
Power Consumption (W)	25
Noise (dB)	45
Product dimension (mm)	250(W) x 168(D) x 256(H)
Weight (kg)	1.5

FWA-R125W100

- Preventing inflow of dust and sand with gravity shutter
- Low power consumption low noise
- Easy installation
- Simple and luxurious design
- Wall mounted type



Ventilation Fan (Wall Mounted Type)



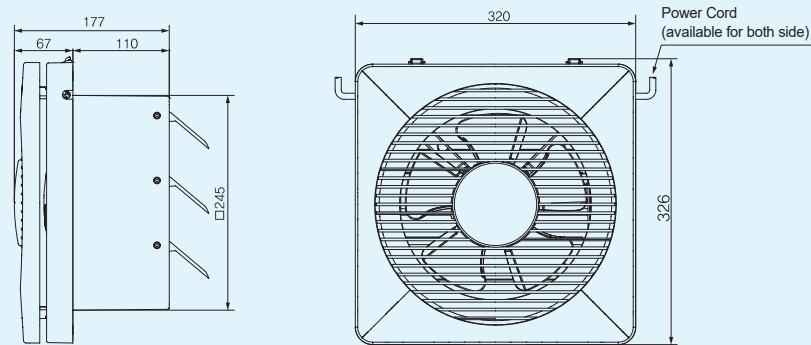
FWA-S200W540

Housing dimension 250 X 250mm (±5mm)

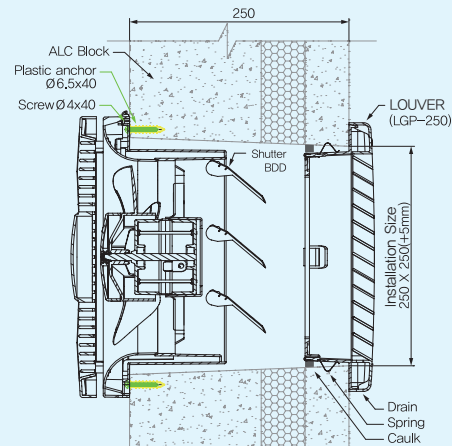
- Preventing inflow of dust and sand with gravity shutter
- Low power consumption low noise
- Easy installation
- Simple and luxurious design
- Wall mounted type



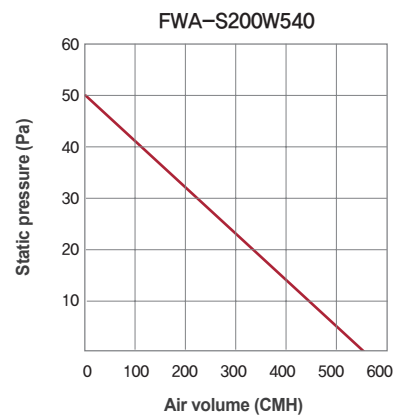
Product dimensions (unit: mm)



How to install the product



Performance



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FWA-S200W540
Static Pressure(Pa)	50
Air volume (CMH)	540
Power consumption (W)	33
Noise (dB)	45
Product dimension (mm)	320(W) X 177(D) X 326(H)
Weight (kg)	2.7
Power	1Ø / 230V / 50Hz

Ventilation Fan (Wall Mounted Type)



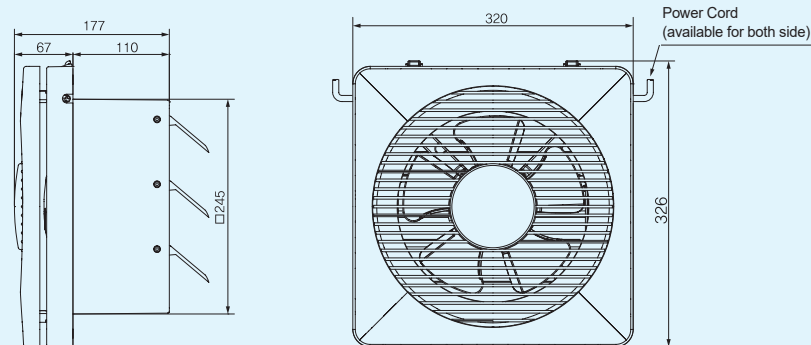
FWA-S250W350
FWA-S250W460

Housing dimension 250 X 250mm (±5mm)

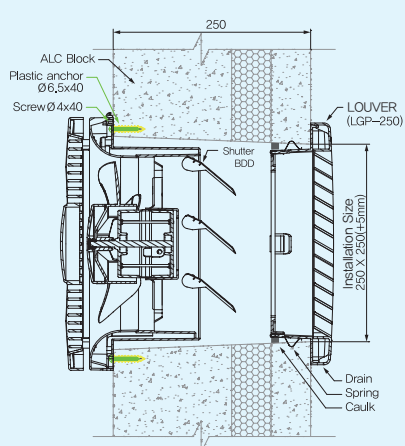
- Preventing inflow of dust and sand with gravity shutter
- Low power consumption low noise
- Easy installation
- Simple and luxurious design
- Wall mounted type



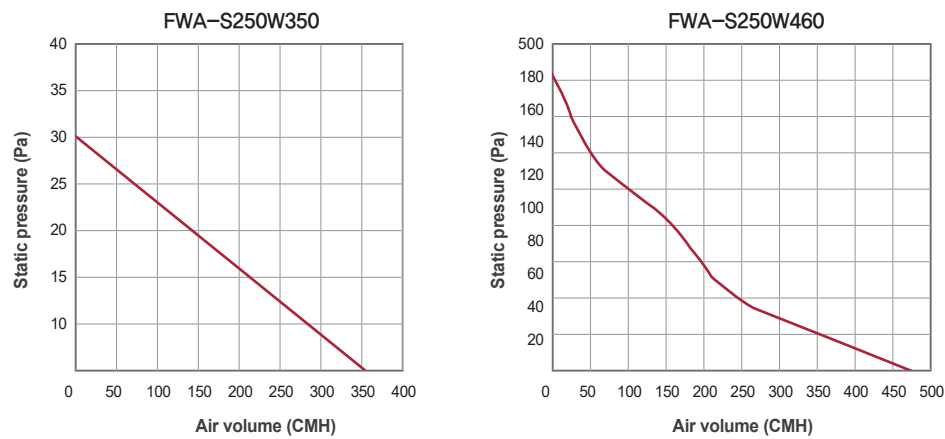
Product dimensions (unit: mm)



How to install the product



Performance



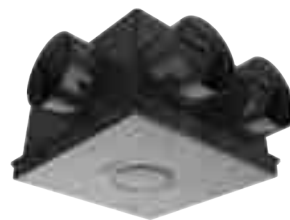
※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FWA-S250W350	FWA-S250W460
Static Pressure (Pa)	30	41.7
Air volume (CMH)	350	469.5
Power consumption (W)	19	25.3
Noise (dB)	40	50
Product dimension (mm)	320(W) X 177(D) X 326(H)	320(W) X 177(D) X 326(H)
Weight (kg)	2.7	2.7
Power	1Ø / 230V / 50Hz	1Ø / 230V / 50Hz

Expandable (Shoe Cabinets, Pantries, Dress Room) Ventilation System



ZEROC FZA-C110S



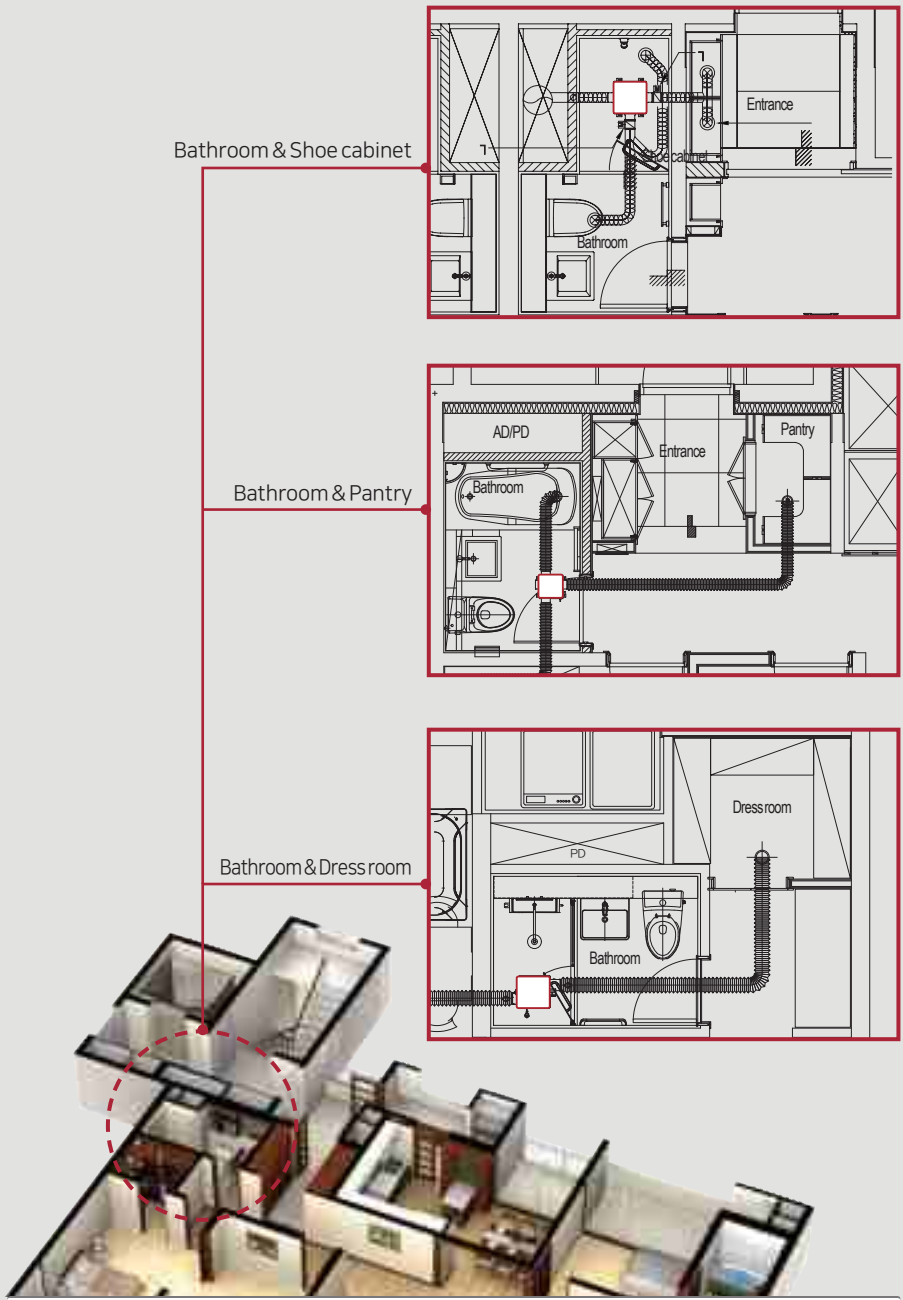
LIVO L2-150



LIVO L2-250



It is effective in removing moisture in the bathroom, odor and mold in local spaces by connecting it with a bathroom ventilation fan



System Description | The bathroom fan control switch enables ventilation for the bathroom, shoe cabinet, pantry, and dressing room at the same time.

Operation description

Switch setting		Operation status		
Bathroom fan S/W	Shoe cabinet S/W	FAN	Bathroom M.D	Shoe cabinet M.D
ON	OFF	1st stage	OPEN	CLOSE
ON	ON	2nd stage	OPEN	OPEN
OFF	ON	1st stage	CLOSE	OPEN
OFF	OFF	Stop	CLOSE	CLOSE

Applicable Models ZEROC series, LIVO series

Ventilation System For Elevator Halls



It creates a pleasant environment by removing the smell of mold and condensation inside the elevator hall.

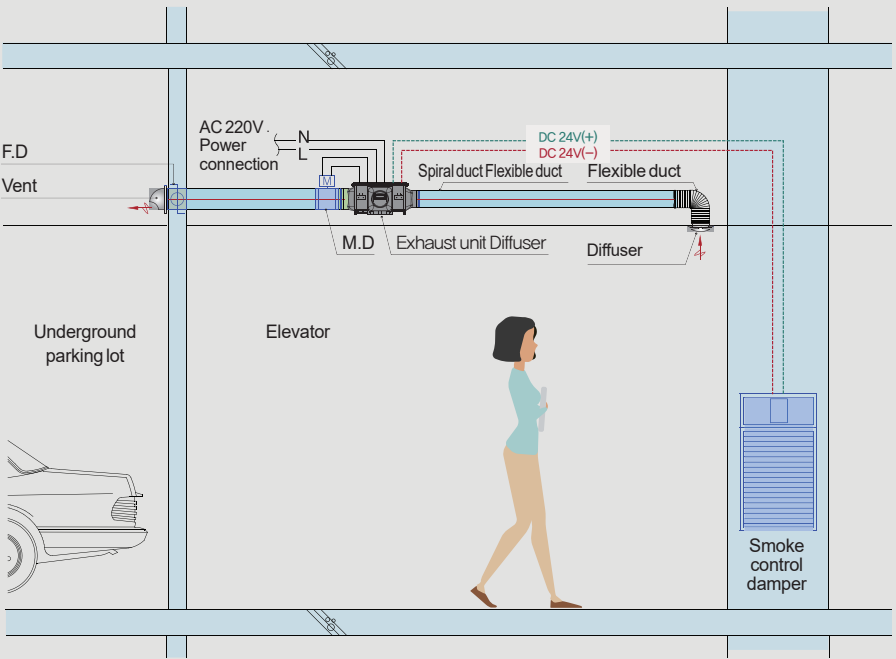


L2-250(EV), L2-300(EV)



HV3-80X(EV)

Operation description



* In case of fire, the fan operation is stopped by interlocking with smoke control damper.

Hybrid (3 kinds) Ventilation System

What is a hybrid Ventilation system?

Hybrid ventilation is the most common ventilation system, which refers to a system that provides a pleasant indoor environment by harmonizing natural ventilation and mechanical ventilation.

Ceiling Type

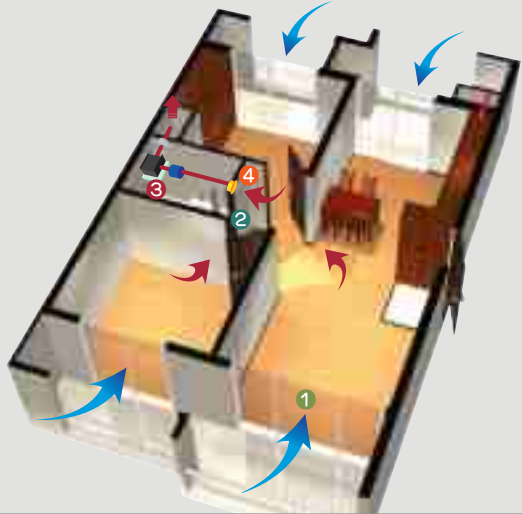
Embedded Type


ZEROC P Remote control


ZEROC Wired control


LIVO


Wired control



Natural Supply Forced Exhaust
This is a ventilation system in which fresh outdoor air is supplied from the natural ventilation system, and contaminated air is guided into the bathroom, and forced exhaust is performed with the bathroom ventilation fan with a constant air volume.

Reservation timer (off reservation) function
Possible to operate the ventilation system for as long as necessary by using the timer.

Advantages of hybrid system

Natural air supply and forced exhaust	The natural air supply using natural ventilation and the forced exhaust using an exhaust fan maintain a pleasant environment
High static pressure constant air volume fan	Maintains stable ventilation by applying LIVO and ZEROC
Maintenance	Unlike ventilation purifiers, system configuration is simple and maintenance is easy.
Installation according to site conditions	Reduced construction cost by selecting a method suitable for the site conditions of the duct or no duct method
Prevention of condensation	Effective in preventing condensation with regular ventilation by natural ventilation

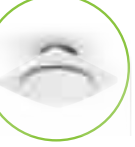
System Configuration

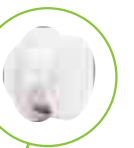
Ceiling embedded hybrid system

Ceiling hybrid system


Motorized damper (M.D.) Triple Insulation Flexible Duct Windproof Hood Cap Grill window for natural air supply


Square diffuser Wired control (HRC-30-SF)


LIVO(L2-150) Fire damper Non-powered grill Flexible duct Round diffuser


Motorized damper (M.D.) Triple Insulation Flexible Duct Windproof Hood Cap Grill window for natural air supply


Wired control (HRC-30-SF)


Fire damper HR3-80X(EV) Flexible duct Round diffuser

Remote control

Wired control



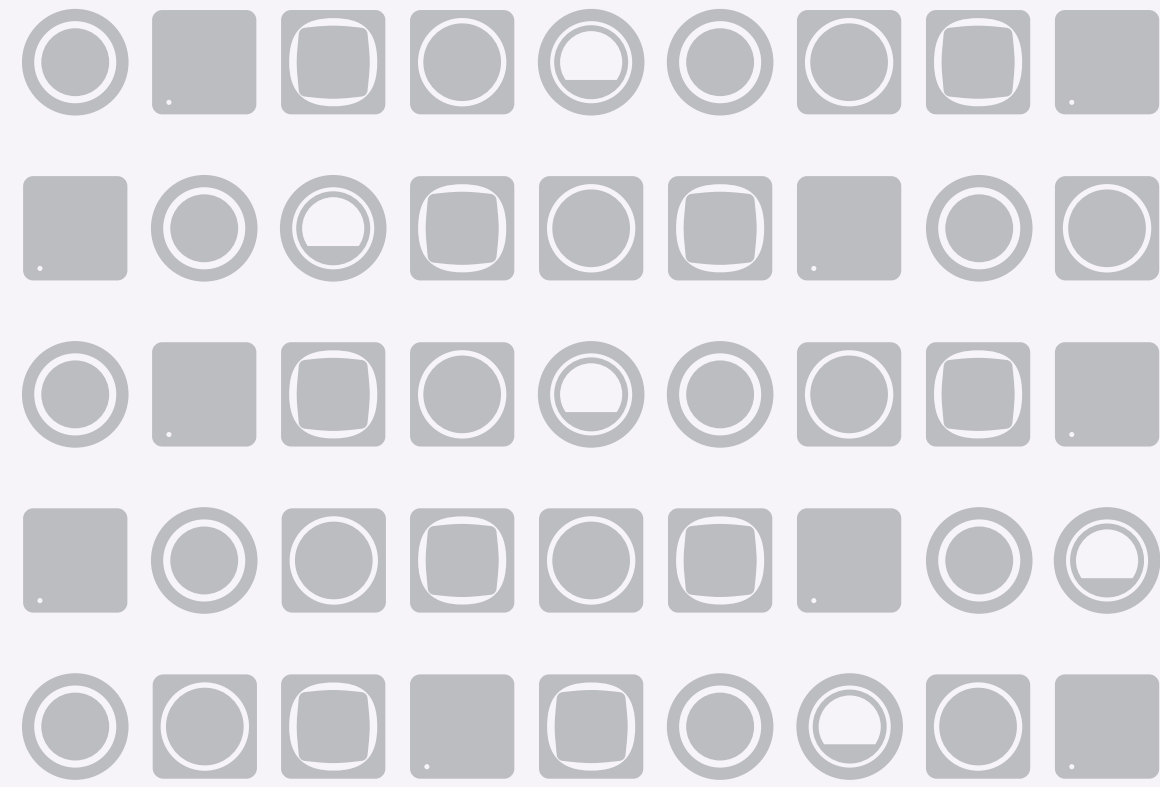
HRC-30-SF HRC-30-DM HRC-30-R HRC-10(White)

- High/Medium/Low 3-stage control
- Integrated switch for bathroom lights
- For bathroom/indoor ventilation
- Timer function (off reservation, 30/60/90 minutes, continuous)
- Home network support available (Power, communication) -RS485

Accessories

Auxiliary materials to help efficient ventilation of the ventilation fan and ventilation purifier.

There are noise reduction device that reduces inter-floor noise, dampers that prevent backflow of pollutants from entering the room, fire damper installed to prevent the spread of toxic substances from fire, connection socket for BDD direct exhaust that blocks the inflow of rainwater, materials that connect or provide space for air to flow, etc.



	HUELEO (The Fan Detachable Hood / Kitchen Range Hood) FDD1-C350I_MD	72
	Noise Reduction Device Between Floors Of Bathroom In Apartment Houses SR3-S100, SR-S100, SR-100	73
	BDD Backflow/Back Draft Prevention Damper Connection socket for direct exhaust in kitchen and bathroom + magnet BDD Connection socket for direct exhaust in kitchen, Connection socket for direct exhaust in kitchen and bathroom (to prevent water inflow), Gravity type BDD	74
	Diffuser DGS-100D, DGS-65D, DGH-100C, DGH-100R, DGH-75R, DGH-65R DGS-100P, DGS-65P, DGS-100R, DGS-100S, DGP-110S	75 76
	Non-Powered Grille DGS-100M, DGS-100LM, DGS-100U, DGS-100F, DGS-100LF	77
	Motorized Damper MDA-100, MDD-100, MD-N, JMD-100H, JMD-125HLD, JMD-150HLD	78
	Fire Damper Spiral duct, Masonry, Elbow type, Eccentric type	79
	Sleeve Access hole sleeve and stopper, Sleeve (for retaining wall), H sleeve (hanger type) Y-TEE connector, Reducer	80
	Vent/Vent Cap •Vent: Bathroom / Kitchen, Energy recovery ventilator, General type, Double type, Louver type •Vent cap: Mesh type	81 82
	Louver LGP-250	82
	Flexible SK-A2, SK-A2V, SK-A4, SK-A2K, SK-Square SK-A2PA, SK-A2VPA SK-A2VP, SK-A4VP, SK-A2VG	83 84
	Certifications CE(FZA-70S1, FZD-C90S, FZA-L110S, HRD-50C, HV3-120, HV-180, FWA-R125D100, FWA-S200W440, FWA-S250W460), ISO 9001, ISO 14001, ISO 45001, SNI, KS	85 86

The Fan Detachable Hood Quieter Than Library

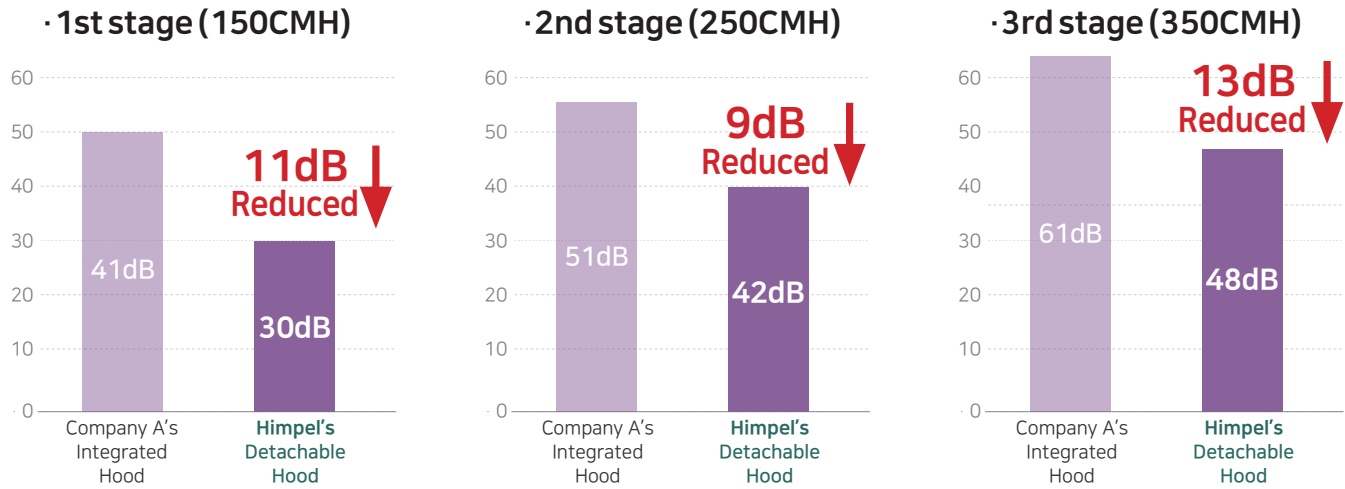


"Are you stressed by the high noise of the existing hood fan?"

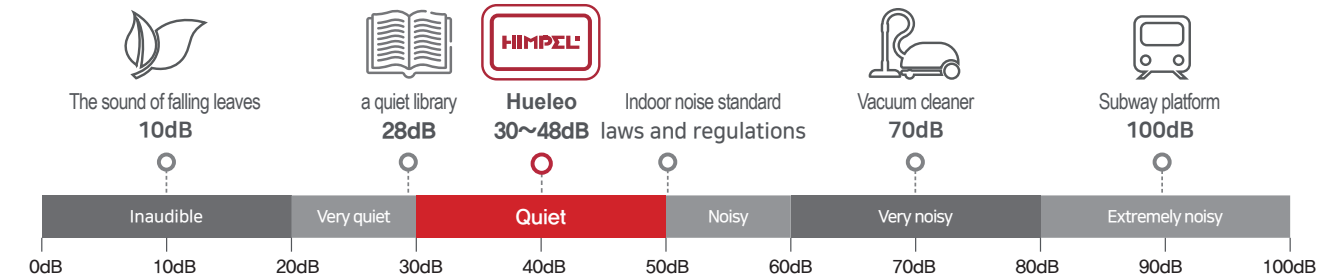
The fan detachable hood **Hueleo** ensures even kitchen ventilation of with low noise!

Noise comparison by air volume

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

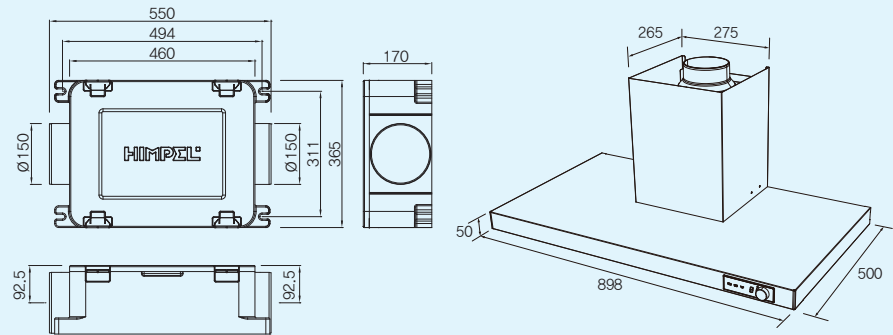


Comparison of noise in everyday life

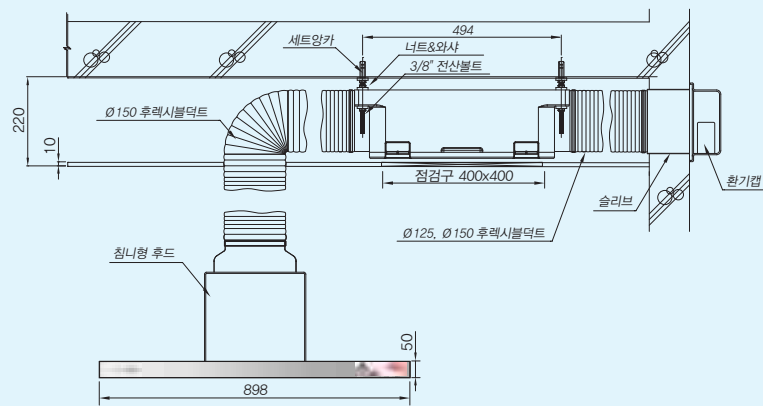


HUELEO (The Fan Detachable Hood / Kitchen Range Hood)

제품 치수 (단위:mm)



제품 설치방법



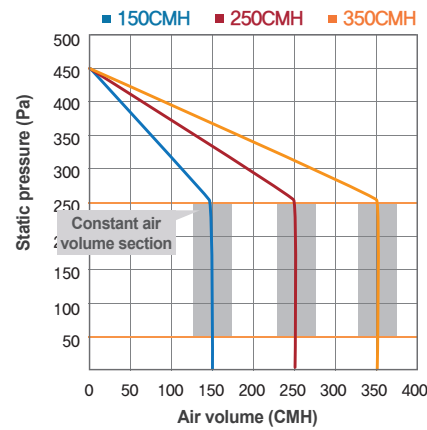
FDD1-C350I-MD

- Duct diameter
- The fan detachable hood : Ø125, Ø150
- Kitchen range hood : Ø150



- BLDC Fan-Motor (High efficiency/ Low noise) (The fan detachable hood)
- Eco-friendly EPP material product (The fan detachable hood)
- 3 to 5 stages of constant air volume control (Kitchen range hood)

Performance



Range hood control



Installation concept diagram



※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model	FDD1-C350I_MD		
Power	Ø 1 X 220V X 60Hz		
Air volume (CMH)	150	250	350
Power consumption (W)	7	20	50
Noise (dB)	30	42	48
Product dimension (mm)	460(W) X 365(D) X 170(H)		
Weight (kg)	5		
Option	-		

(KC인종 시험 기준)

Noise Reduction Device Between Floors Of Bathroom In Apartment Houses



SR3-S100

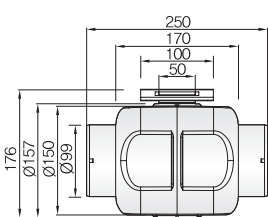


SR-S100

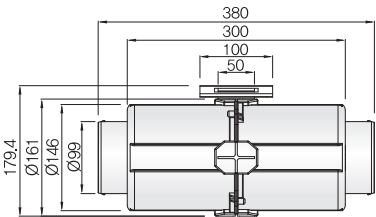


SR-100

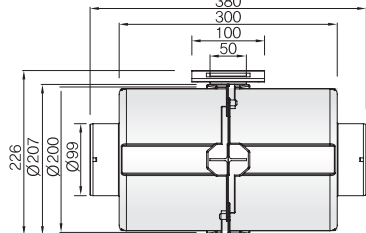
Dimensions



· SR3-S100



· SR-S100

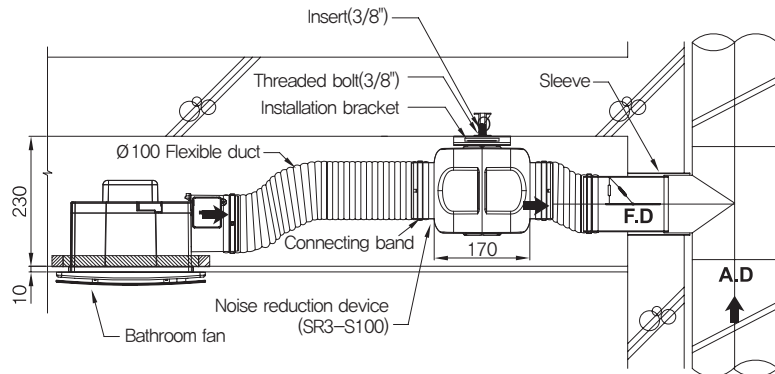


· SR-100

Noise-blocking exhaust port

- A noise-blocking exhaust port is an exhaust port that can reduce noise while allowing ventilation in an open state.
- Acquiring 2 additional points for green building certification standards (bathroom noise) by applying noise reduction devices between floors of bathrooms in apartment houses

How to install



Green Building Certification Standard-Bathroom Noise

Evaluation index

Grade	Grade criteria
1st grade	9 points or more
2nd grade	7~8 points
3rd grade	5~6 points
4th grade	4 points or below

Additional points

Noise reduction method	Score
Maintain water supply pressure for each household below 2.5 kg/cm ²	3
Adoption of water-saving toilet	2
Insulation construction such as cushioning material on the pipe penetration part	1
Use of low-noise drain pipe	2
Adoption of the piping method of the corresponding floor for sewage and drainage pipes	4
Establishment of measures to prevent noise transmission between the upper and lower floors of the exhaust AD	2

Measures to prevent noise transmission between upper and lower floors through exhaust AD (Air Duct) refers to the installation of independent supply and exhaust pipes, installation of multiple ADs so that the exhaust ports between adjacent upper and lower floors do not pass directly, or when noise-blocking exhaust ports are installed. Here, the noise-blocking type exhaust port refers to an exhaust port with a difference in noise-blocking performance of 5 dB (A) or more with a general exhaust port.

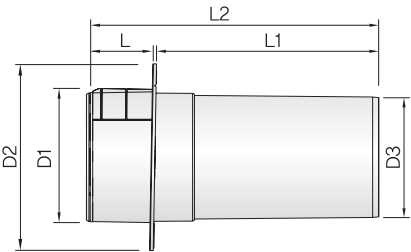
BDD Backflow / Back Draft Prevention Damper

Connection socket for direct exhaust in bathroom + magnetic BDD

- Material and composition
BDG2-80M, 100M - Body : ABS / Wing : PC
BDG-125M - ABS
Clean hose, outer wall sleeve connection socket
Magnetic high airtight damper (Optional)

Model name	L	L1	L2	D1	D2	D3	Note
BDG2-80M	53	180	235	Ø107	Ø150	Ø81	Magnetic
BDG2-100M	53	179	235	Ø107	Ø150	Ø97	
BDG-125M	67	180	250	Ø130	Ø175	Ø123	

* When used as a connection socket for direct exhaust, the magnetic BDD is removed.
* Unit: mm

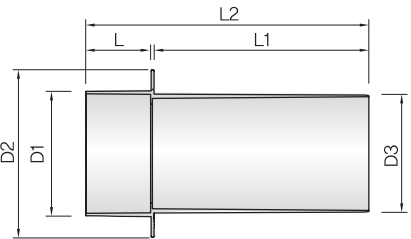


Connection socket for direct exhaust in kitchen

- Material and composition
PP

Model name	L	L1	L2	D1	D2	D3
BDK-125M	67	220	290	Ø130	Ø175	Ø124

* Unit: mm

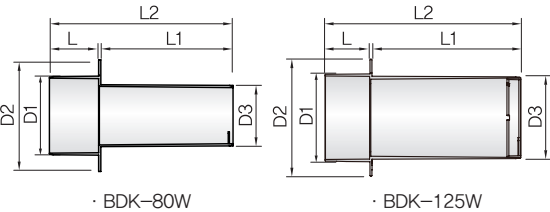


Connection socket for direct exhaust in bathroom and kitchen (Preventing water intake)

- Material and composition
BDK-80W : Body, Bracket - ABS
BDK-100W, BDK-125W :
Body - PP / Bracket - ABS

Model name	L	L1	L2	D1	D2	D3
BDK-80W	67	180	250	Ø106.2	Ø150	Ø81.3
BDK-100W	67	180	250	Ø105	Ø150	Ø99
BDK-125W	67	222.5	271	Ø130	Ø175	Ø123

* Unit: mm

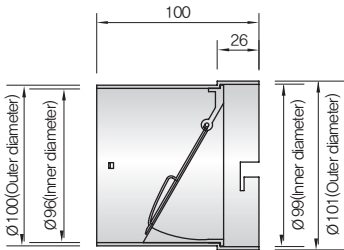


Gravity type BDD

- Material and composition
PP
Gravity type single wing (with sound insulation)

Model name	Size	Product size	Note
BDG-100V	Ø100	Ø100 x L100	Gravity type

* Unit: mm



Diffuser

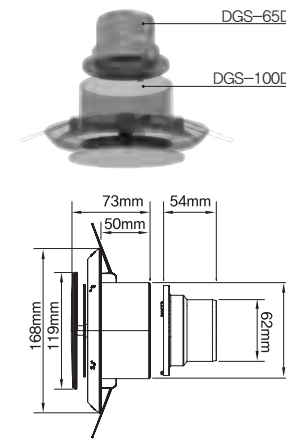
Integrated damper type diffuser (invention patent)



Integrated air volume control damper

- Esthetic marking for 7-step adjustment of Seven Star
- Diffuser internal pipe connection reducer (63~67mm)

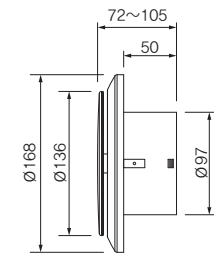
- Duct diameter: Ø100/Ø63~67 (when connecting reducer)
- Material : ABS
- Perforated dimensions : Ø120



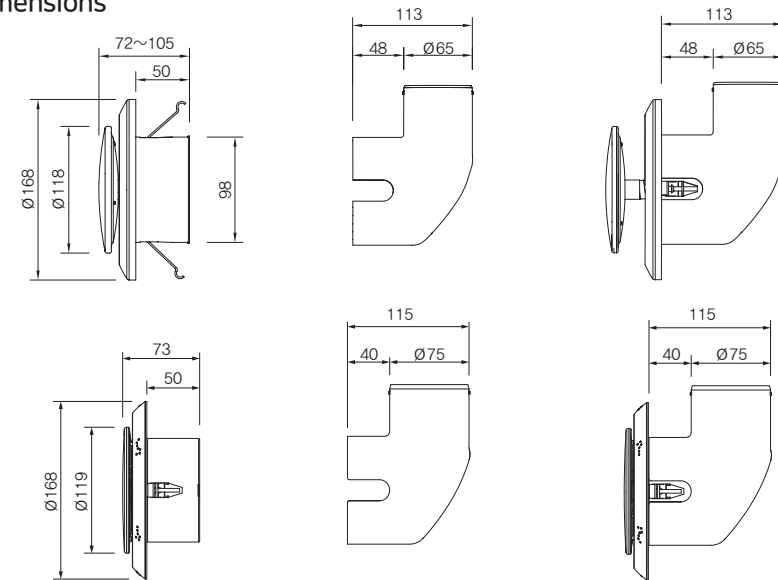
Features

A diffuser with the Coanda effect that allows gas to flow to the ceiling along a curved surface and spread air supply evenly into the room without a congestion section.

- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : Ø120



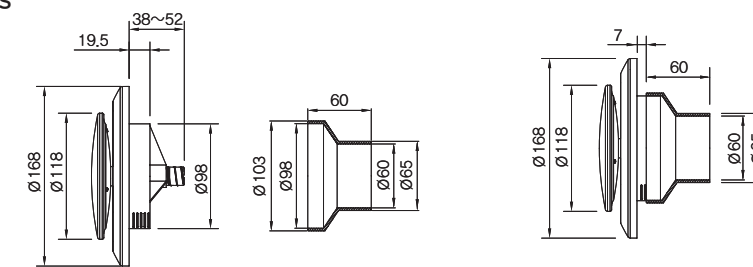
Dimensions



Specification

Duct diameter: Ø100	Duct diameter: Ø75	Duct diameter: Ø65
Material : ABS	Material : ABS	Material : ABS
Perforated dimensions : Ø120	Perforated dimensions : Ø120	Perforated dimensions : Ø120

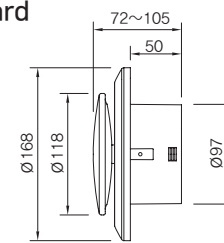
Dimensions



Specification

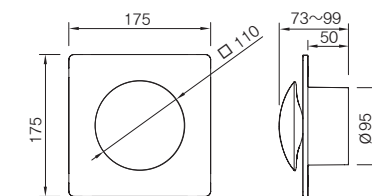
- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : Ø120
- Duct diameter: Ø65
- Material : ABS
- Perforated dimensions : Ø120

Dimension Standard



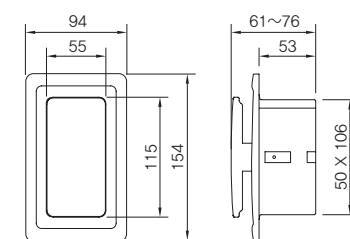
- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : Ø120

Dimension Standard



- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : Ø120

Dimension Standard



- Duct diameter: 110x55
- Material : ABS
- Perforated dimensions : 120x60
- For flat square duct

DGS-100P Slim Type Diffuser

DGS-65P

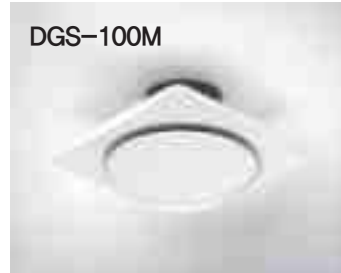
DGS-100R

DGS-100S

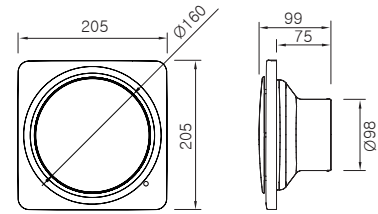
DGP-110S

Non-Powered Grille

DGS-100M

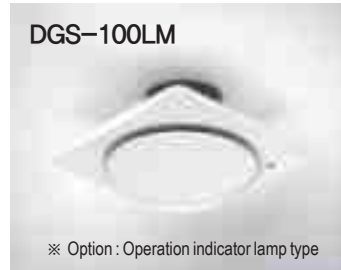


Dimension Standard

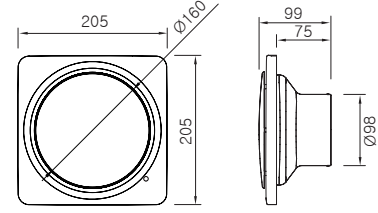


- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : 160X160(±5mm)

DGS-100LM



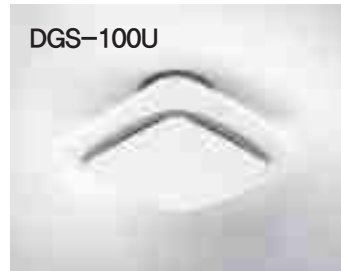
Dimension Standard



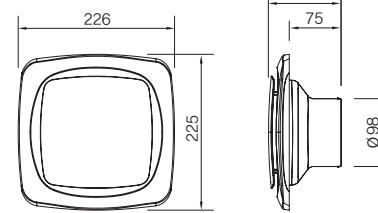
- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : 160X160(±5mm)

※ Option : Operation indicator lamp type

DGS-100U



Dimension Standard

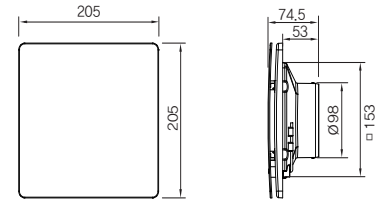


- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : 160X160(±5mm)

DGS2-100NF



Dimension Standard

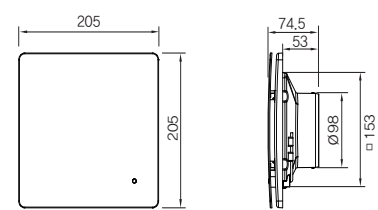


- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : 160X160(±5mm)

DGS2-100NLF



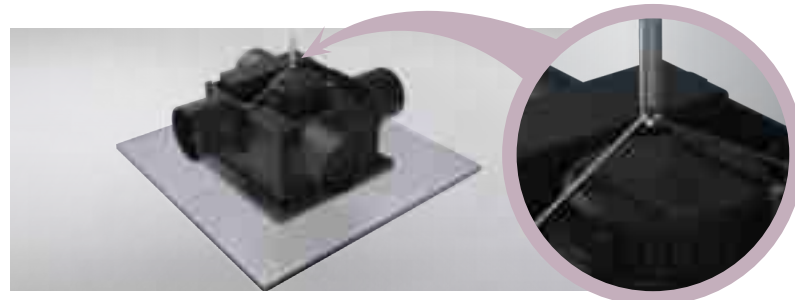
Dimension Standard



- Duct diameter: Ø100
- Material : ABS
- Perforated dimensions : 160X160(±5mm)

※ Option : Operation indicator lamp type

High Static Pressure (Constant Air Volume) Ventilation Fan Reinforcement Bracket



- Applicable model: ZERO C
- Product model: BRK-200

Motorized Damper

Motorized damper (ABS)

- Material : ABS
- TORQUE : 150N·cm or more □ Reduction ratio=1 : 300(3RPM)

Model name	D1(Ø)	L(mm)	L1(mm)	L2(mm)	Power consumption(W)	Weight(g)
MDA-100	99	130	110	35	3	260

- Material : ABS
- TORQUE : 150N·cm or more □ Reduction ratio=1 : 40(4RPM)

Model name	D1(Ø)	L(mm)	L1(mm)	L2(mm)	Power consumption(W)	Weight(g)
MDD-100DP	99	130	110	35	3	440

- Material : ABS
- TORQUE : 150N·cm or more □ Reduction ratio=1 : 40(4RPM)

Model name	D1(Ø)	L(mm)	L1(mm)	L2(mm)	Power consumption(W)	Weight(g)
MDD-100DP-P	99	130	137.5	35	3	461

※ DP-P (flange type) is compatible with other companies' ventilator outlet Ø98.5~Ø100

- Material : ABS
- TORQUE : 150N·cm or more □ Reduction ratio=1 : 40(4RPM)

Model name	D1(Ø)	L(mm)	L1(mm)	L2(mm)	Power consumption(W)	Weight(g)
MDD-100D	99	177	112	41	3	490

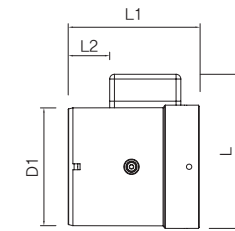
- Material : ABS
- TORQUE : 98mN.m or more

Model name	D1(Ø)	L(mm)	L1(mm)	L2(mm)	Power consumption(W)	Weight(g)
MD-N	99	153	100.9	30	2.5	167

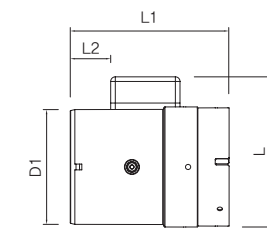
Motorized damper (EGI)

- Material: EGI 1.0T / Powder coating
- Motor type: DC Geared motor
- TORQUE : 150N·cm or more □ Reduction ratio=1 : 1660(4RPM)

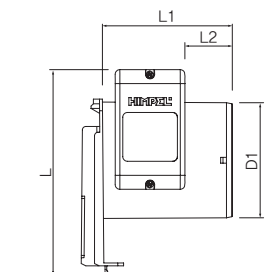
Model name	D1(Ø)	L(mm)	L1(mm)	L2(mm)	Power consumption(W)	Weight(g)
JMD-S100HLD	99	145	138	30	4	745
JMD-S125HLD	123	167	158	36	4	900



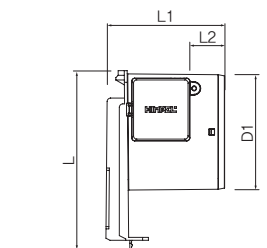
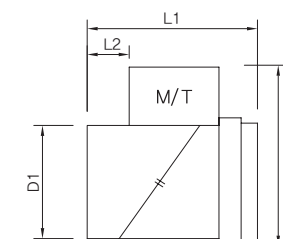
DP(Press-fit type)



DP-P(Flange type)



D(Integrated type)


MD-N
(Integrated type)


Fire Damper

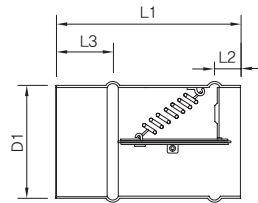


For spiral duct

B : 72°C fuse in bathroom

K : 103°C fuse, inserted into spiral duct tube in kitchen

□ Material: STEEL 1.6T / powder coating



Model name	Size(Ø)	D1(Ø)	L1(mm)	L2(mm)	L3(mm)
			Custom-made possible	Flexible locking jaw	Duct pipe insertion part (adjustable)
FDB-100S / FDK-100S	100	98	150	20	60
FDB-125S / FDK-125S	125	123	150	20	50
FDB-150S / FDK-150S	150	148	170	20	-
FDB-200S / FDK-200S	200	198	230	20	-



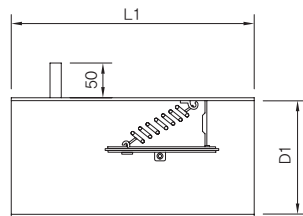
For masonry

3/8" Threaded socket attachable, threaded socket welding, position adjustable

B : 72°C fuse in bathroom

K : 103°C fuse in kitchen

□ Material: STEEL 1.6T / powder coating



Model name	Size(Ø)	D1(Ø)	L1(mm)
			Length adjustable
FDB-100M / FDK-100M	100	98	170
FDB-125M / FDK-125M	125	123	170
FDB-150M / FDK-150M	150	148	170
FDB-200M / FDK-200M	200	198	230



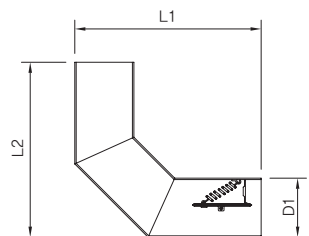
Elbow type

90° Elbow

B : 72°C fuse in bathroom

K : 103°C fuse in kitchen

□ Material: STEEL 1.6T / powder coating



Model name	Size(Ø)	D1(Ø)	L1(mm)	L2(mm)
FDB-100E / FDK-100E	100	98	Custom-made	Custom-made
FDB-125E / FDK-125E	125	123	Custom-made	Custom-made



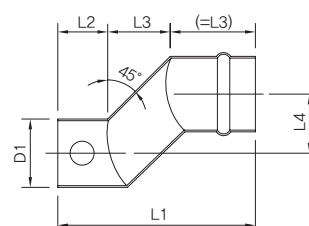
Eccentric type

90° Elbow

B : 72°C fuse in bathroom

K : 103°C fuse in kitchen

□ Material: STEEL 1.6T / powder coating



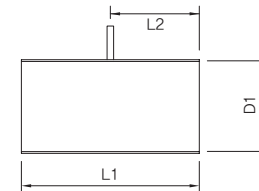
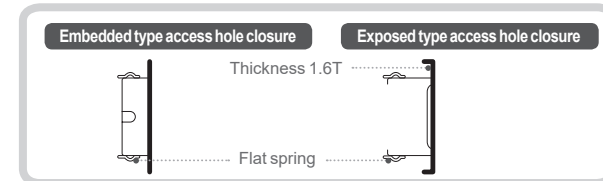
Model name	Size(Ø)	D1(Ø)	L1(mm)	L2(mm)	L3(mm):Eccentric	L4(mm)
			Adjustable	Adjustable	Adjustable	Adjustable according to the situation
SLP-100	100	98	230	75	50	50
SLP-125	125	123	240	85	50	50

Sleeve

Access hole sleeves and closures

Use: Using an endoscope camera to understand the internal situation of the A.D duct

□ Material: STEEL 1.6T / white, black powder coating (color changeable)



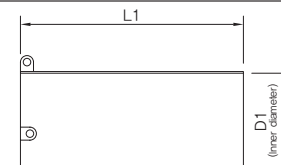
Model name	Size(Ø)	D1(Ø)	L1(mm)Length adjustable	L2(mm)Length adjustable
SLR-75I	75	75	Custom-made	Ø75 X 150(Center socket)
SLR-100I	100	100	Custom-made	Ø100 X 150(Center socket)



Sleeve (for retaining wall)

Used when the retaining wall is Euroform, and used for F.D insertion and through sleeve

□ Material: STEEL 1.6T / Powder coating, custom-made available for the length and size



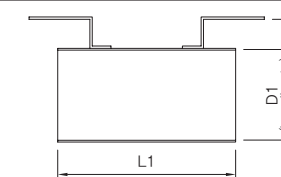
Model name	Size(Ø)	D1(Ø) Custom-made	L1(mm)
SLR-100C	100	100	Custom-made (Retaining wall thickness)
SLR-125C	125	125	
SLR-150C	150	150	
SLR-175C	175	175	
SLR-200C	200	200	
SLR-250C	250	250	



H sleeve (hanger type)

Used as a damper insertion and through sleeve, easy workability as it works on Alform

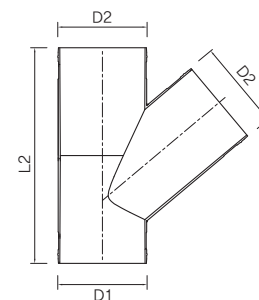
□ Material: STEEL 1.6T / powder coating



Model name	Size(Ø)	D1(Ø)	L1(mm)Length adjustable	H(mm) height adjustable
SLR-100H	100	100	Custom-made	Custom-made
SLR-125H	125	125		
SLR-150H	150	150		

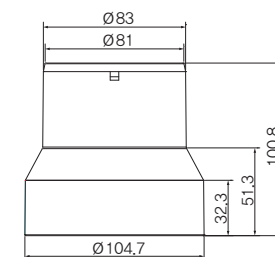


Y-TEE connector



Model name	Size(Ø)	L1(mm)	D1(Ø)	D2(Ø)	Material
VCS-100E	100 X 100 X 100	240	98	98	PP
VCS-85E	100 X 85 X 85	308	98	85	PP
VCS-80E	100 X 80 X 80	323	98	78	PP

Reducer



Model name	Size(Ø)	Material
VCS-85R	85	PP

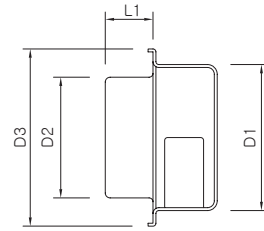
Vent (Ventilation Cap)



Ventilation cap (windproof)-for bathroom and kitchen

□ Material : AL (Powder coating)

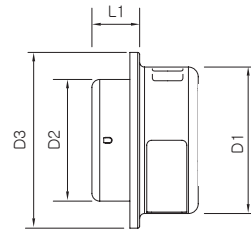
Model name	Size(Ø)	D1(Ø)	D2(Ø)	D3(Ø)	L1(mm)	Use
VCW-75	75	100	73	120	40	-
VCW-100	100	122	98	146	45	-
VCW-100A	100	150	98	182	45	Bathroom
VCW-125	125	150	123	182	50	-
VCW-125A	125	170	123	182	50	Kitchen
VCW-150	150	182	148	210	50	-
VCW-200	200	250	198	300	80	-
VCW-250	250	250	248	300	80	-



Ventilation cap (windproof)-for bathroom and kitchen

□ Material: AL (Powder coating)

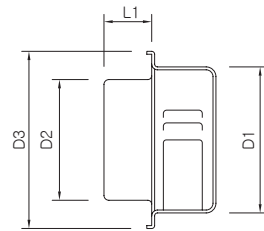
Model name	Size(Ø)	D1(Ø)	D2(Ø)	D3(Ø)	L1(mm)	Use
VCW-100DS	100	150	99	180	50	Bathroom
VCW-125DS	125	150	124.5	180	50	Kitchen



Ventilation cap (windproof)-for energy recovery ventilator

□ Material : AL (Powder coating)

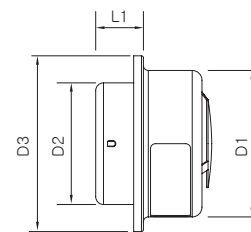
Model name	Size(Ø)	D1(Ø)	D2(Ø)	D3(Ø)	L1(mm)	Use
VCW-125L	125	150	123	182	50	Left
VCW-125R	125	150	123	182	50	Right



Ventilation cap (windproof)

□ Material : AL (Powder coating)

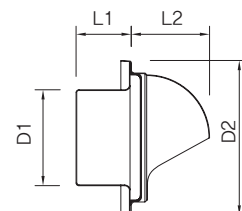
Model name	Size(Ø)	D1(Ø)	D2(Ø)	D3(Ø)	L1(mm)	Use
VCW-100N	100	150	99	180	50	Bathroom
VCW-125N	125	150	124.5	180	50	Kitchen



Ventilation cap (General type)

□ Material : AL (powder coating) / SUS

Model name	Size(Ø)	D1(Ø)	D2(Ø)	L1(mm)	L2(mm)
VCS-50	50	54	90	40	50
VCS-75	75	73	120	40	80
VCS-100	100	98	144	45	80
VCS-125	125	123	180	50	100
VCS-150	150	148	180	50	100
VCS-200	200	198	300	80	185
VCS-250	250	248	300	80	185
VCS-300	300	295	400	100	200
VCS-350	350	345	400	100	200

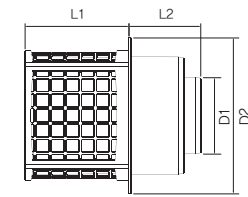


Vent (Ventilation Cap)

Vent cap ventilation

□ Material : ASA

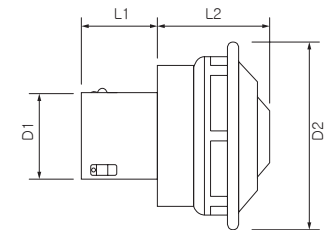
Size(Ø)	D1(Ø)	D2(Ø)	L1(mm)	L2(mm)
HVC-75N100	81	105	97	65



Ventilation cap (Dual type)

□ Material : AL (Powder coating)

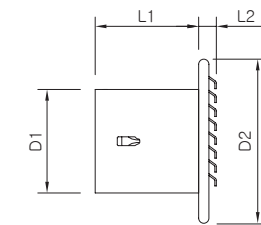
Model name	Size(Ø)	D1(Ø)	D2(Ø)	L1(mm)	L2(mm)
VCW-100A2	100	98	200	45	100
VCW-125A2	125	123	200	70	100
VCW-150A2	150	148	200	80	100



Ventilation cap (Louver type)

□ Material : AL (Powder coating)

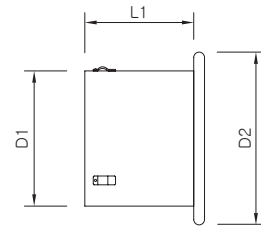
Model name	Size(Ø)	D1(Ø)	Connector Outer Diameter	D2(Ø)	L1(mm)	L2(mm)
VCL-75	75	73	144	40	12	
VCL-100	100	98	144	45	12	
VCL-125	125	123	182	50	12	
VCL-150	150	147	182	50	12	
VCL-200	200	197	300	80	12	



Vent cap (Mesh type)

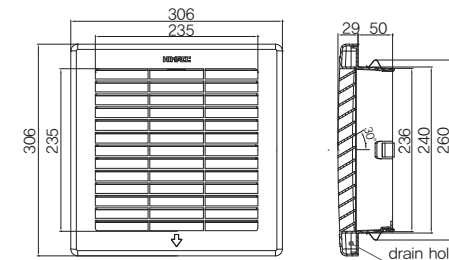
□ Material : AL (Powder coating)

Model name	Size(Ø)	D1(Ø)	D2(Ø)	L1(mm)
VCM-50	50	50	70	40
VCM-75	75	73	90	40
VCM-100	100	98	120	40

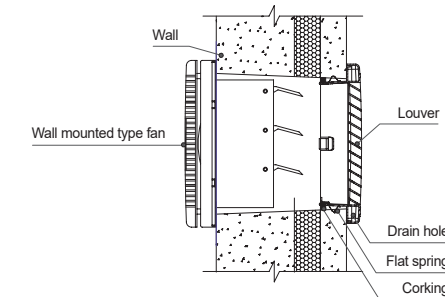


Louver

Dimensions (LGP-250)



How to install (Wall mounted type)



Product specifications

※ Product specifications and performance are subject to change depending on the quality improvement or installation conditions.

Model name	LGP-250	LGP-200
Product size (mm)	306 x 306	256 x 256
Material	Louver	PP + UV stabilizer
	Flat spring	Stainless steel plate

LGP-250

Perforated dimension □250mm

- Easy installation and maintenance
- Excellent stability
- Suitable for any appearance

Flexible



SK-A2 (AL silver foil 2P)

- Material: Aluminum Foil/Polyester Film Laminated X 2ply/copper-plated steel wire
- Adhesion: Self-hardening Type
- Operating temperature/pressure: -30℃~120℃ / 30m/sec
- Production standard: 50mm~ standard size
- Usage: APT toilet, household air supply and exhaust / Kitchen range hood exhaust air conditioning facility / air supply and exhaust of sanitary facilities



SK-A2V (AL silver foil 2P absorption)

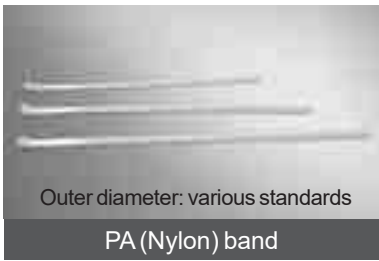
- Material: Perforated Aluminum Foil/Polyester Film Laminated X 2ply/Copper plated steel wire/ Moisture-proof external cylinder-Aluminum Foil, Vaper Barrier
- Adhesion: Self-hardening Type
- Operating temperature/pressure: -30℃~140℃ / 30m/sec
- Production standard: 100mm~ Standard size / ① Sound-absorbing pipe (compressed/integrated)-automatic production ② Sound-absorbing pipe (general)-manual production
- Usage: APT toilet, household air supply and exhaust / air supply and exhaust of air conditioning facilities



- Material: Aluminum Foil/Polyester Film Laminated X 4ply/Copper plated steel wire
- Adhesion: Self-hardening type / double-sided bonding method
- Operating temperature/pressure: -30℃~140℃ / 30m/sec
- Production standard: 50mm~ standard size
- Use: Air supply and exhaust of smoke controlling and air conditioning facilities / Kitchen range hood exhaust /



Outer diameter: various standards
SUS (stainless steel) band



Outer diameter: various standards
PA (Nylon) band



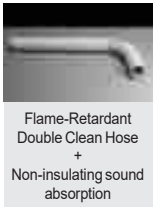
Saddles

Materials: EGI, GI, Steel
Production standard: 110X54, 204X60, 300X60, other custom-made
Length: For fixing APT household ventilation ducts

SK-A2K (Flame-Retardant Double Clean Hose)

Certified as the best eco-friendly building material HB ❸❸❸❸❸❸❸❸

- Material: Aluminum Foil 4ply + Polyester Film + Soft PVC Laminated Spring Copper Wire (copper-plated steel wire)/hard steel wire
- Specification: Flame-retardant double clean hose
- Adhesion: Special Thermal Fusion Part / Special thermal bonding method
- Production standard: 65mm / 85mm / 100mm / ~ 150mm
- Usage: For direct exhaust in bathroom / household ventilation air supply exhaust / other air supply exhaust piping



SK-square/Square+Circle/Square insulating

- Production standards / materials: All square duct standards / All duct hose materials 75X40 / 100X40 / 110X54 / 204X60 / 250X80 / 300X60
- Use: APT toilet, household ventilation, shoe cabinet ventilation, supply and exhaust of air conditioning facilities

Size(Ø)	Width x Height (mm)
65	64 x 40
85	100 x 40
100	120 x 40
108	110 x 54
125	150 x 50
165	204 x 60
225	300 x 60



square insulating

SK-A2PA (silver foil triple poly wool insulation)

SK-A2VPA (Silver foil triple sound absorption poly wool insulation)

- Material: Aluminum Foil/Polyester Film Laminated X 2ply / Copper-plated steel wire
- Specifications: ① AL hose ② AL sound absorption hose + compressed poly wool + AL hose (white / yellow / pink)
- Adhesion/Use temperature/pressure: Self-hardening type/ -30℃~120℃ / 30m/sec
- Insulation: Flame-retardant compressed poly wool (the weight of the poly wool increased) + AL hose (white / yellow / pink)
- Production standard: 100mm~ 300mm Other order specifications
- Usage: air supply/exhaust for energy recovery ventilator in APT households / air supply and exhaust of air conditioning facilities



SK-A2VP (AL silver foil 2P sound absorption Poly wool insulation)

SK-A4VP (AL silver foil 4P absorption Poly wool insulation)

SK-A2VG (AL silver foil 2P sound absorption glass wool insulation)

- Material: Perforated Aluminum Foil/Polyester Film Laminated X 2, 4ply / Copper-plated steel wire
- Specification: ① AL sound absorption hose ② AL 4P sound absorption hose + polycotton ③ AL sound absorption hose + glass wool
- Adhesion / Temperature / Pressure: Self-hardening Type/ -30℃~140℃ / 30m/sec
- Insulation: Poly wool / Glass wool / Moisture-proof outer casing-Aluminum Foil / Vaper Barrier
- Production standard: 100mm~ 500mm / other order specifications
- Use: For building facility air conditioning / air supply/exhaust for energy recovery ventilator in APT households / Air conditioning facilities that require soundproofing/absorption performance (department store / music hall / etc.)

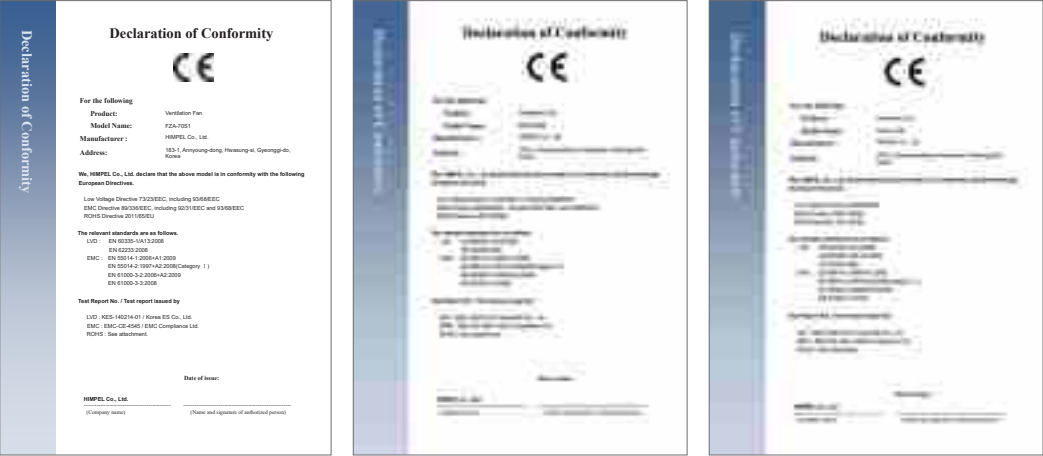


Certification Status

CE Certifications

20 CE certification172 Patent and utility model47 Design registration14 Trademark registration16 Constant air volume certificationGreen technology certificationLab affiliated company

FZA-70S1
FZD-C90S
FZA-L110S



HRD-50C
HV3-120
HV-180



FWA-R125D100
FWA-S200W440
FWA-S250W460



Certification Status

ISO, SNI, KS Certifications

ISO 9001
ISO 14001
ISO 45001



SNI



KS (Heat Recovery Ventilation System)



MEMO



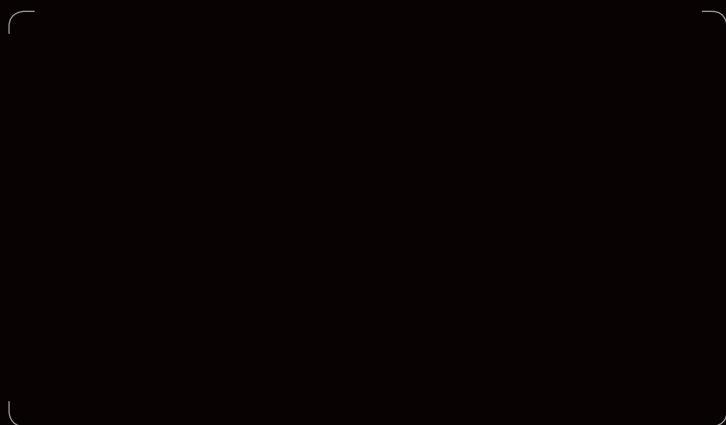
MEMO



“HIMPEL is a **Ventilation Specialized Company**”

We constantly research to fill the room
with fresh air and transform it into a comfortable environment.





※ Product specifications and performance are subject to change without prior notice for quality improvement.



5 Anyeongnam-ro, Hwasung-si, Gyeonggi-do

TEL 82-31-424-8403 / 82-70-4245-2707 FAX 82-31-424-0993

E-mail sales@himpel.co.kr