

HEAT RECOVERY VENTILATORS



Lossnay ventilation systems are renowned industry-wide for their efficiency. They offer environment-friendly energy recovery and enable air conditioning systems to simultaneously provide optimum room comfort and energy savings.

Quiet Operation

Noise is one of the most common concerns for residential ventilation. Ultra quiet operation is achieved with the sirocco fan designed by Mitsubishi Electric. The balance between airflow and static pressure is optimized and the fan rotation is minimized, leading to low noise levels.

Air Purification

An optional filter removes NOx and PM2.5 and improves indoor air quality. They can be incorporated inside the unit without any filter box, which saves space.

*NOx: Nitrogen oxide, which includes nitric oxide (NO) and nitrogen dioxide (NO₂).
*PM2.5: Airborne particulates that are 2.5µm or smaller in size.

Wi-Fi Control

MELCloud is a Cloud-based solution for controlling Lossnay units either locally or remotely by computer, tablet or smartphone via the Internet. It allows Lossnay operations to be checked and controlled via MELCloud from virtually anywhere an Internet connection is available. With MELCloud, the Lossnay system can be used much more easily and conveniently.

Key Features

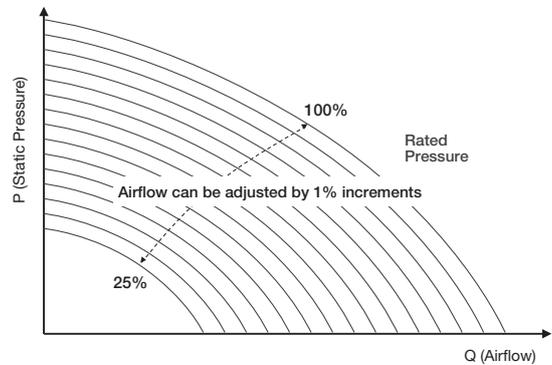
Energy Efficiency

Under regulation (EU) No. 1254/2014, the VL-CZPVU series has the highest energy-saving performance in its class. (ErP A+) It saves heating and cooling costs by minimizing the energy loss that occurs during ventilation.



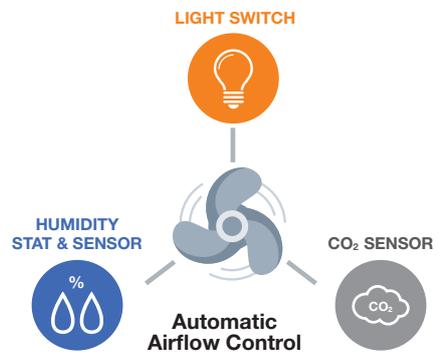
Variable Airflow Control

The default fan speed value (Fan speed 1: 30%, Fan speed 2: 50%, Fan speed 3: 70%, and Fan speed 4: 100%) of both supply air and exhaust air can be adjusted flexibly. Within the range between 25% and 100%, airflow can be adjusted by 1% increments to satisfactorily meet the designed airflow rate.



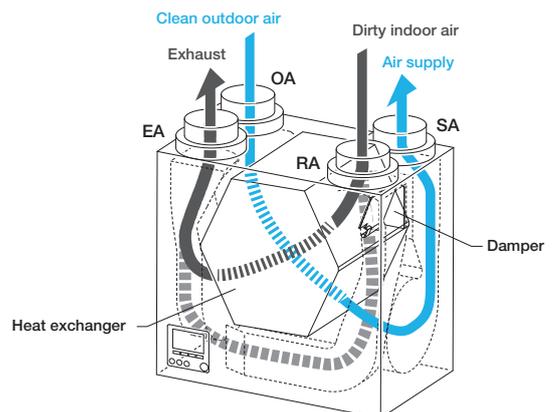
External Airflow Control

The airflow from the Lossnay unit can be altered using 0-10V signals from the controllers, such as the humidity stat and CO₂ sensor (field supply). The Lossnay unit is also connected to the light switch and can change to boost operation mode (input 220-240V). These devices are connected directly to the Lossnay unit, allowing automatic fan speed control according to bathroom occupation, CO₂ level, and humidity level.



Automatic Bypass Mode

It is possible to switch between “Lossnay ventilation (with heat exchange)” and “Bypass ventilation (without heat exchange)” either manually or automatically. When outside air is cooler than indoor air in summer, the unit directly draws in outside air, bypassing the heat exchanger.



* The figure shows VL-350CZPVU-L-E

Wide Operating Temperature Range

The VL-CZPVU series can operate at temperatures down to -15°C. With a pre-heater, it can operate at temperatures down to -25°C.

* In areas where outdoor air falls below -20°C, an electric shutter (locally supplied) is required in the OA duct in addition to the pre-heater.

* The OA temperature must be higher than -15°C to use the pre-heater.

MELCloud for Lossnay

MELCloud enables fast, easy remote control and monitoring of Lossnay units. Wireless computer connectivity and an Internet-connected mobile or fixed terminal are all that are needed. MELCloud can also be used to control room air conditioners and Ecodan heat pumps simultaneously.

Key Control and Monitoring Features

1. Turning system on/off
2. Switching airflow & operating modes (Heat recovery / Bypass)
3. Confirming the status of the filter/core (Maintenance notification)



* MELCloud uses the MAC-5671F-E interface

Model

VL-250CZPVU-R/L-E

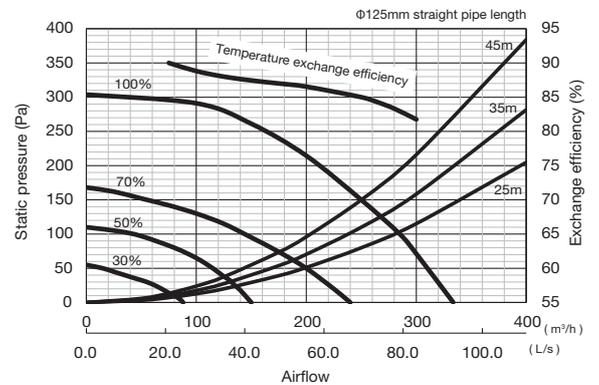
Specifications

Electrical Power Supply	220-240V/50Hz, 220V-/60Hz				
Ventilation Mode	Heat recovery mode				
Fan Speed	FS4 (100%)	FS3 (70%)	FS2 (50%)	FS1 (30%)	
Running Current (A)	0.76	0.35	0.20	0.12	
Input Power (W)	106	44	23	11	
Airflow	(m ³ /h)	250	175	125	75
	(L/s)	69	49	35	21
External Static Pressure (Pa)	150	74	38	14	
Temperature Exchange Efficiency (%)	85	87	88	90	
Noise Level (dB)	31	22	16	15 >	
Energy Efficiency Class	A+				
Weight (kg)	26				
Dimensions (mm)	(H) 565 x (W) 595 x (D) 356				

■ Attention

1. The above values are at factory default.
2. The running current, the input power, the efficiency and the noise are based on the rating airflow, and 230V/50Hz.
3. The sound pressure level at 3m is spherical.
4. Temperature exchange efficiency (%) is based on winter condition.
5. Mitsubishi Electric measures figures in the chart according to EN13141-7:2010, and the characteristic curves are measured by chamber method.

PQ Chart

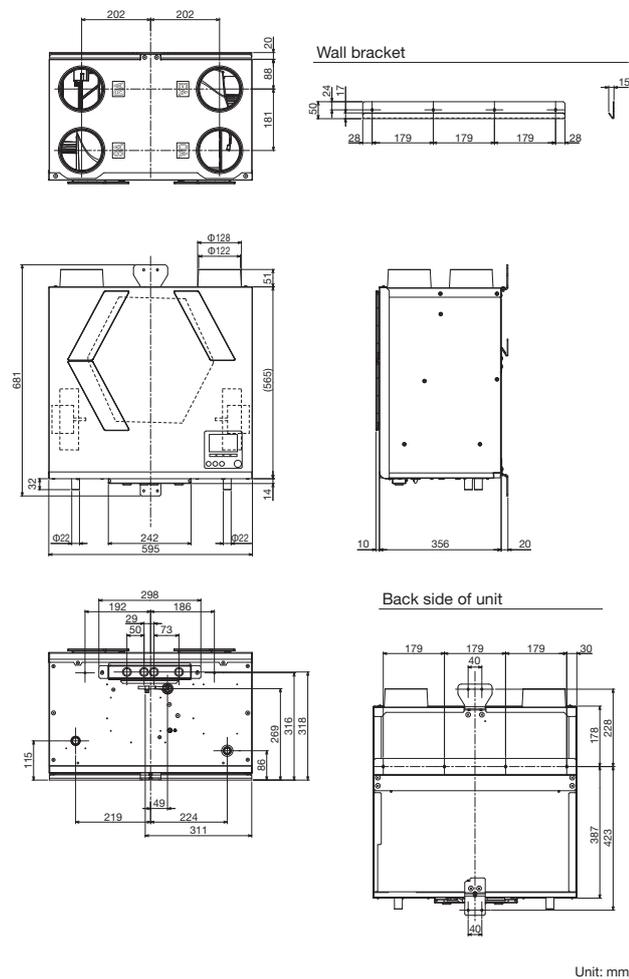


■ Attention

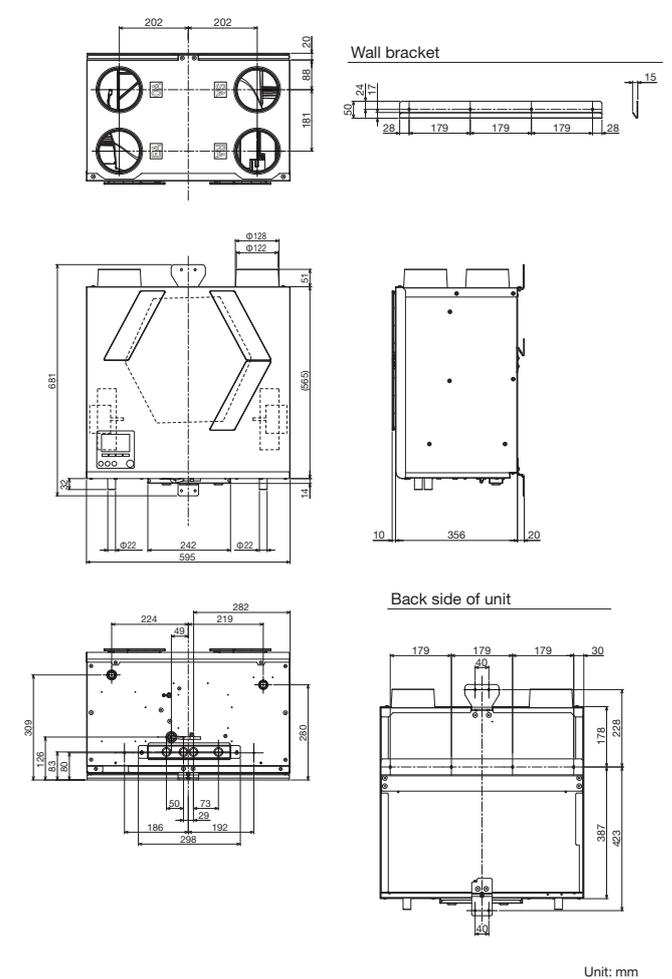
Mitsubishi Electric measures figures in the chart according to EN13141-7:2010, and the characteristic curves are measured by chamber method.

Dimensions

VL-250CZPVU-R-E



VL-250CZPVU-L-E



Model

VL-350CZPVU-R/L-E

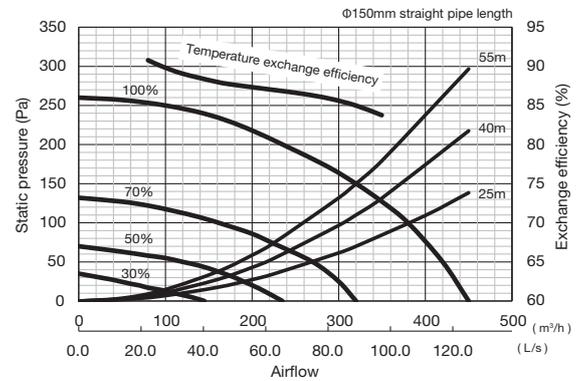
Specifications

Electrical Power Supply	220-240V/50Hz, 220V-/60Hz				
Ventilation Mode	Heat recovery mode				
Fan Speed	FS4 (100%)	FS3 (70%)	FS2 (50%)	FS1 (30%)	
Running Current (A)	1.08	0.52	0.31	0.18	
Input Power (W)	155	71	37	19	
Airflow	(m ³ /h)	320	224	160	96
	(L/s)	89	62	44	27
External Static Pressure (Pa)	150	74	38	14	
Temperature Exchange Efficiency (%)	85	87	88	90	
Noise Level (dB)	35	26	19	15>	
Energy Efficiency Class	A+				
Weight (kg)	32				
Dimensions (mm)	(H) 623 x (W) 658 x (D) 432				

■ Attention

1. The above values are at factory default.
2. The running current, the input power, the efficiency and the noise are based on the rating airflow, and 230V/50Hz.
3. The sound pressure level at 3m is spherical.
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PQ Chart

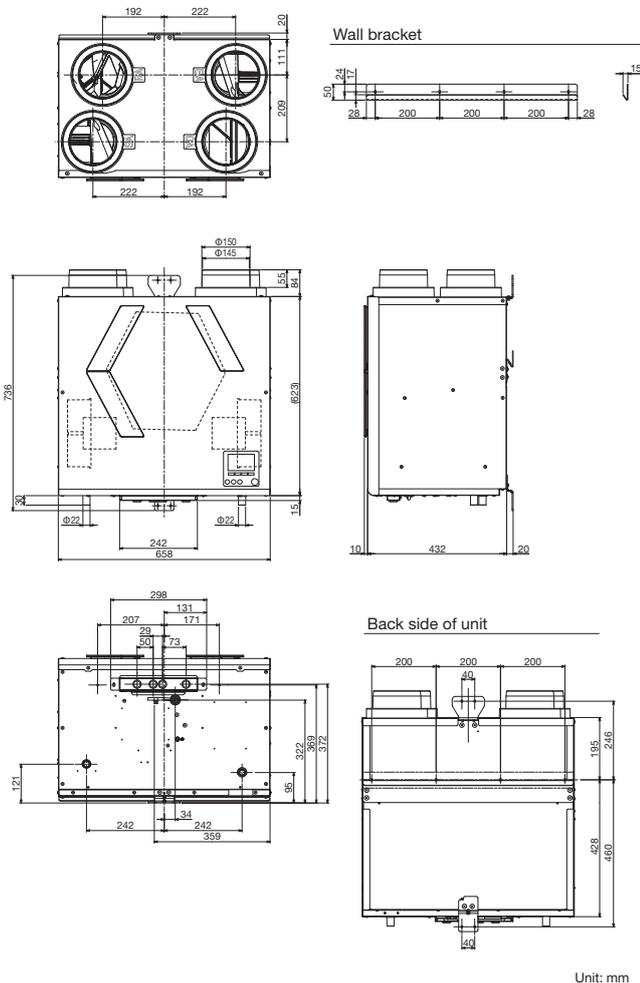


■ Attention

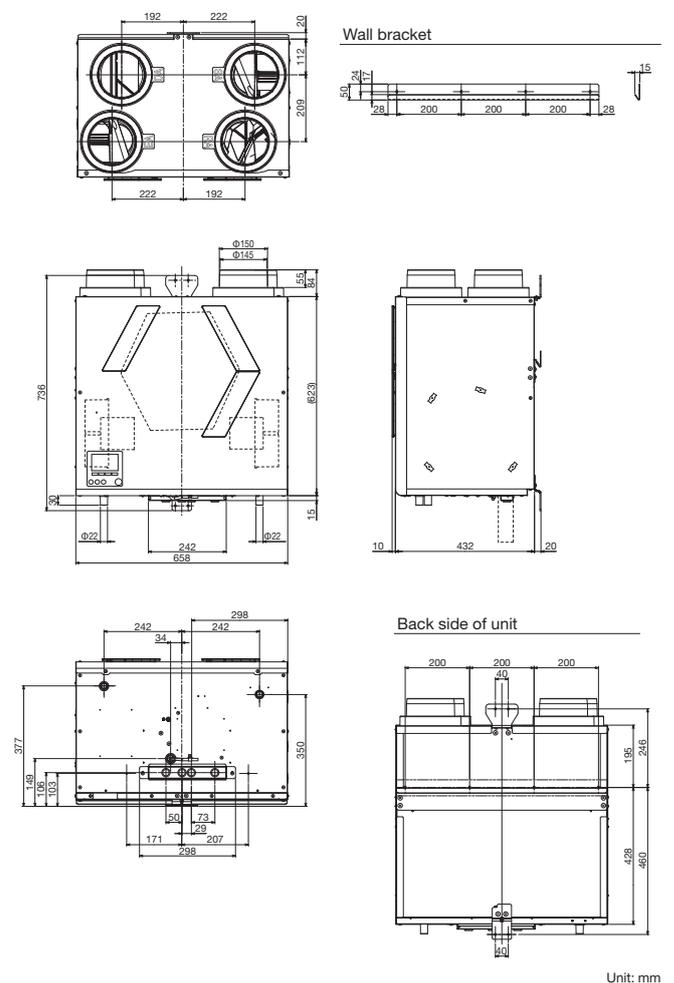
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Dimensions

VL-350CZPVU-R-E



VL-350CZPVU-L-E



Model

VL-500CZPVU-R/L-E

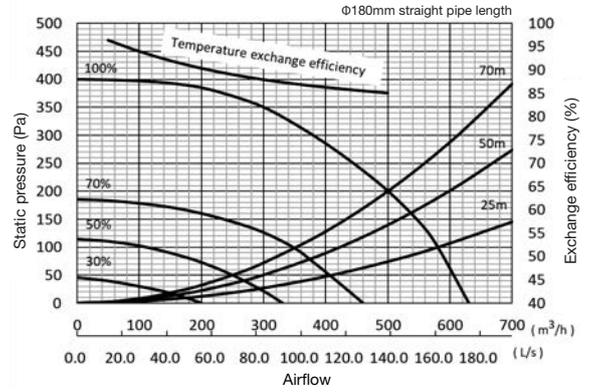
Specifications

Electrical Power Supply	220-240V/50Hz, 220V-/60Hz				
Ventilation Mode	Heat recovery mode				
Fan Speed	FS4 (100%)	FS3 (70%)	FS2 (50%)	FS1 (30%)	
Running Current (A)	1.73	0.77	0.40	0.19	
Input Power (W)	275	104	49	21	
Airflow	(m ³ /h)	500	350	250	150
	(L/s)	139	97	69	42
External Static Pressure (Pa)	200	98	50	18	
Temperature Exchange Efficiency (%)	85	87	89	92	
Noise Level (dB)	37	29	22	15>	
Energy Efficiency Class	A+				
Weight (kg)	39				
Dimensions (mm)	(H) 632 x (W) 725 x (D) 556				

■ Attention

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2. The running current, the input power, the efficiency and the noise are based on the rating airflow, and 230V/50Hz.
3. The sound pressure level at 3m is spherical.
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PQ Chart

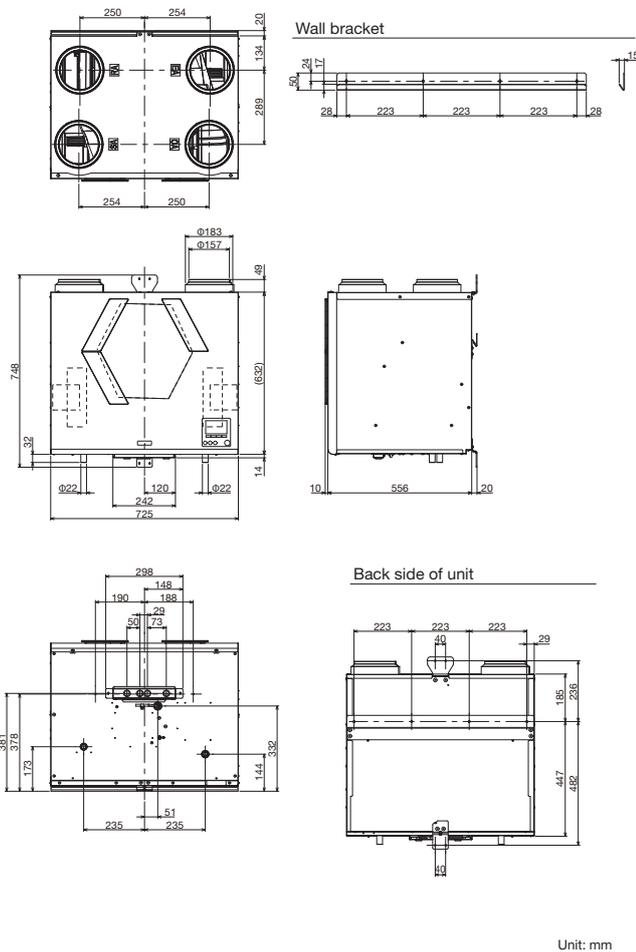


■ Attention

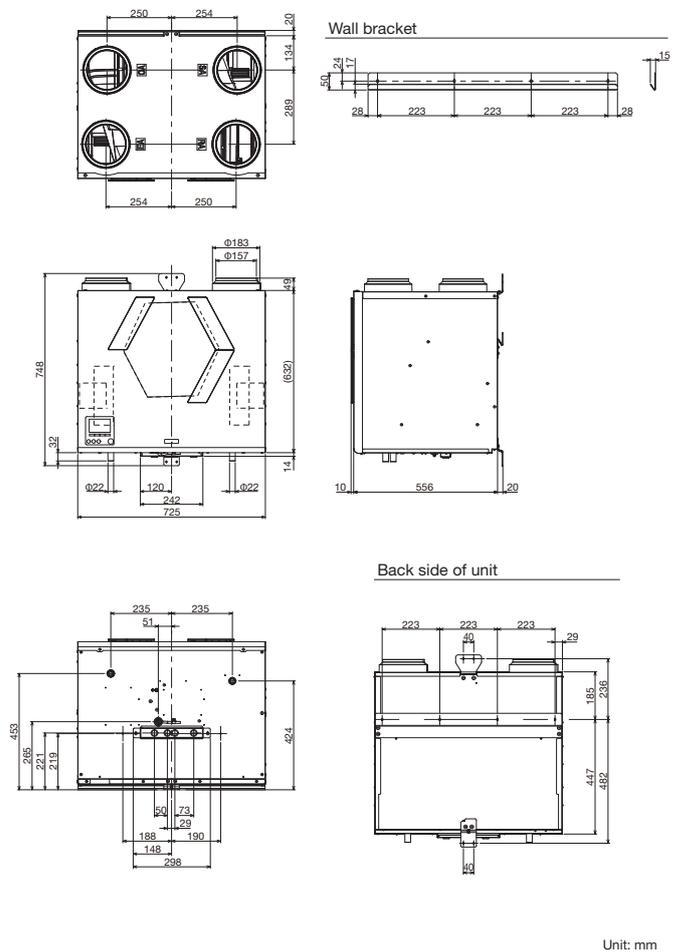
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Dimensions

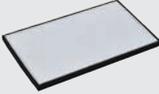
VL-500CZPVU-R-E



VL-500CZPVU-L-E

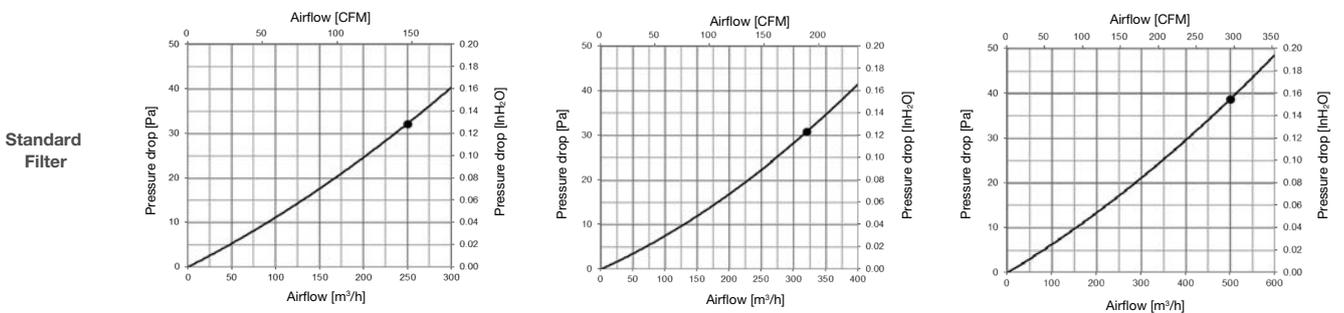


Filters

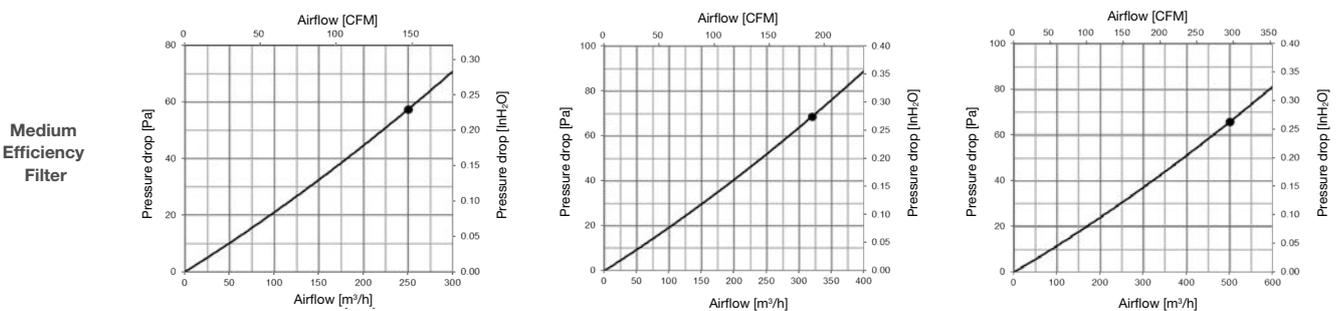
Type	Replacement Filter	Standard Filter	Medium Efficiency Filter	Advanced Efficiency Filter	Advanced High Efficiency Filter	NOx Filter
						
Model	P-250F-E P-350F-E P-500F-E	P-250SF-E P-350SF-E P-500SF-E	P-250MF-E P-350MF-E P-500MF-E	P-250PF-E P-350PF-E P-500PF-E	P-250PFH-E P-350PFH-E P-500PFH-E	P-250NF-E P-350NF-E P-500NF-E
Classification	EN779 (2012)	G3	G4	M6	M6	
	ISO 16890 (2016)	Coarse 55%	Coarse 90%	ePM10 80%	ePM2.5 50%	ePM1 55%

■ Pressure loss characteristics

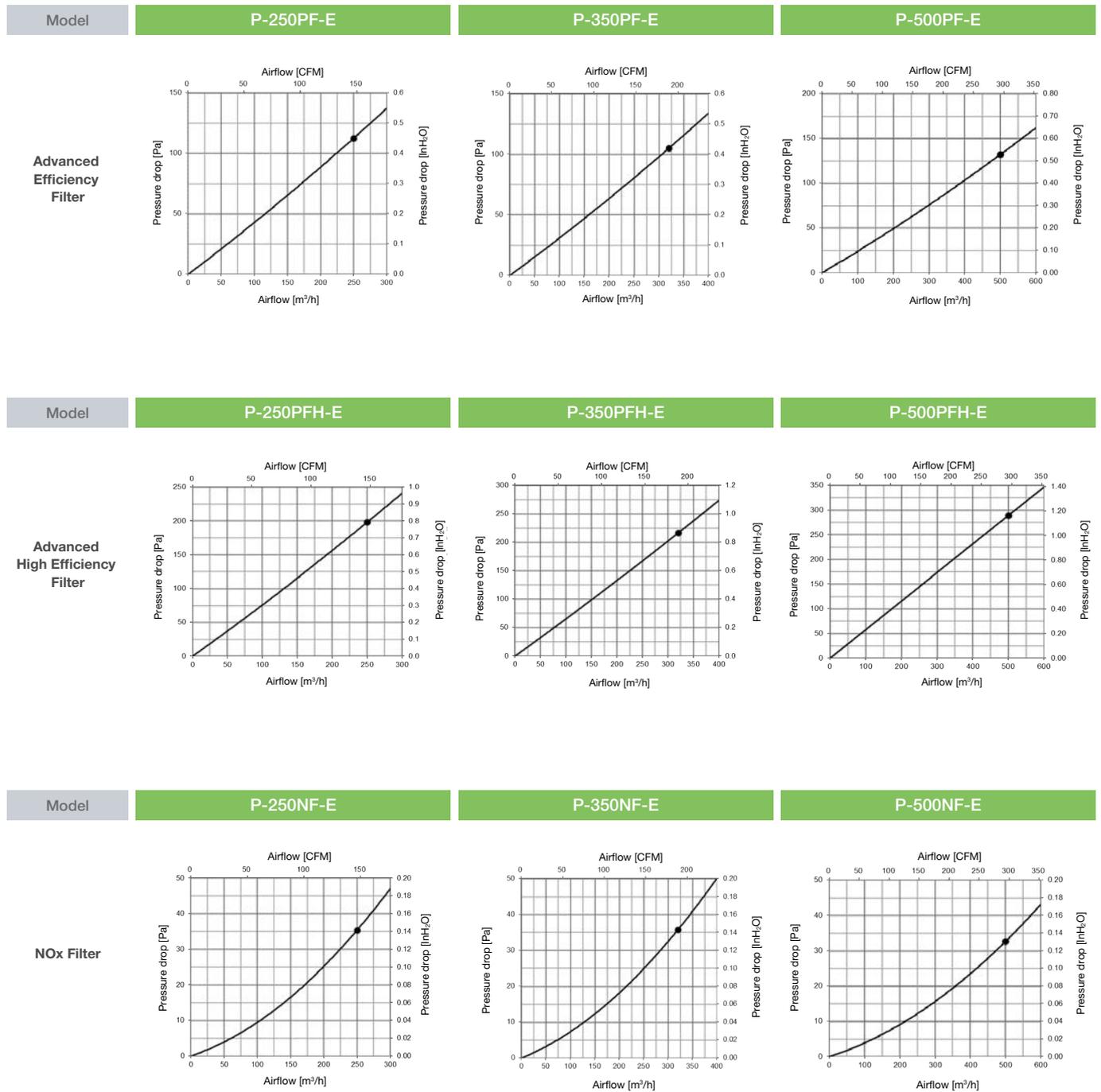
Model	P-250SF-E	P-350SF-E	P-500SF-E
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Model	P-250MF-E	P-350MF-E	P-500MF-E
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■ Pressure loss characteristics



Silencer Box

P-250/350/500SB-E

Noise level can be further decreased by using a silencer box.



Installation Image

Model

P-250SB-E

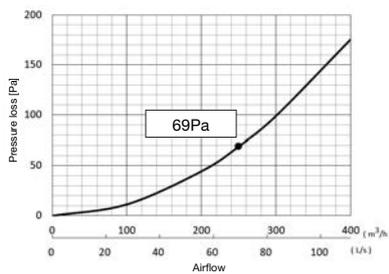
Attenuation of sound power level for center frequency

Airflow (m³/h)	Static pressure (Pa)	Point	Attenuation of sound power level for center frequency Hz (dB)							
			63	125	250	500	1000	2000	4000	8000
175	74	Outlet (SA/EA)	9	7	11	19	29	28	21	13

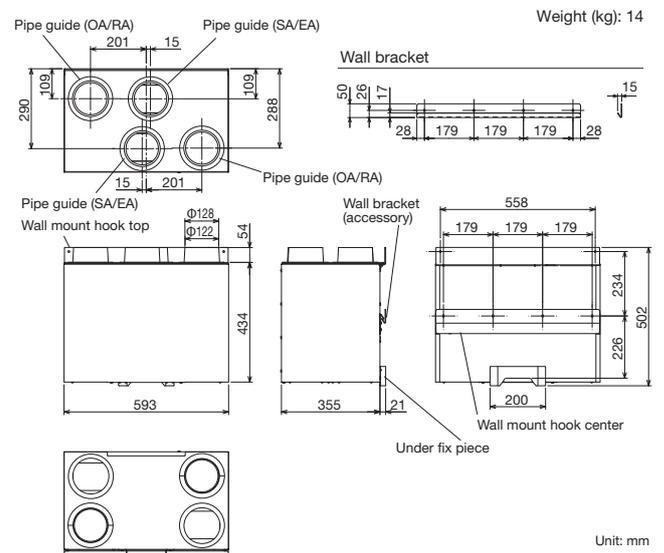
- Figures on the chart above are measured by Mitsubishi Electric.
- The silencer box is placed on the just after the outlet of the Lossnay unit based on the Installation Manual.
- When the airflow differs, the attenuation may be also different from the chart above.

Pressure loss curve

The curve on the right shows the total pressure drop of the OA and SA or RA and EA ducts in the silencer box.



Dimensions



Model

P-350SB-E

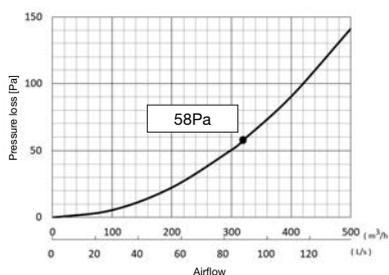
Attenuation of sound power level for center frequency

Airflow (m³/h)	Static pressure (Pa)	Point	Attenuation of sound power level for center frequency Hz (dB)							
			63	125	250	500	1000	2000	4000	8000
224	74	Outlet (SA/EA)	12	8	11	21	32	29	19	12

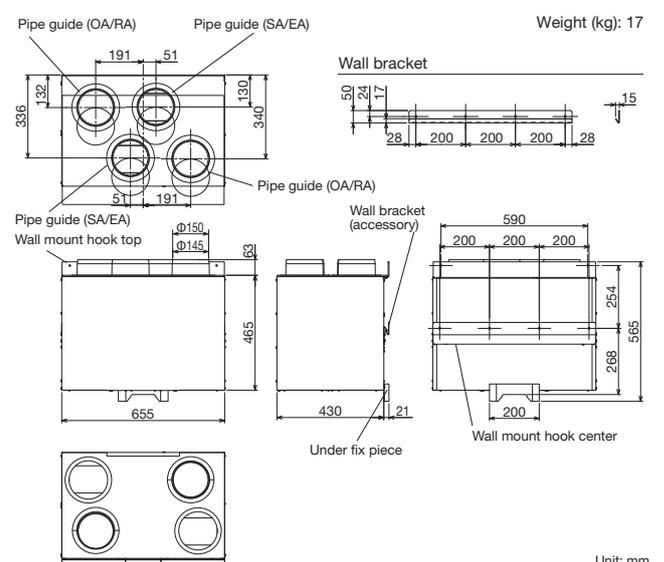
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Pressure loss curve

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Dimensions



Model

P-500SB-E

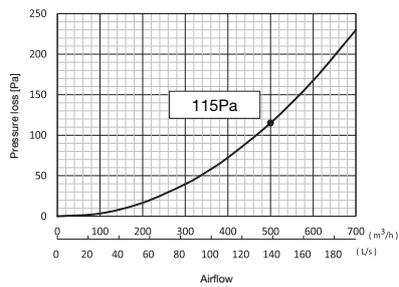
■ Attenuation of sound power level for center frequency

Airflow (m ³ /h)	Static pressure (Pa)	Point	Attenuation of sound power level for center frequency Hz (dB)							
			63	125	250	500	1000	2000	4000	8000
350	98	Outlet (SA/EA)	10.5	9.5	13.0	21.0	27.0	29.0	26.0	14.0

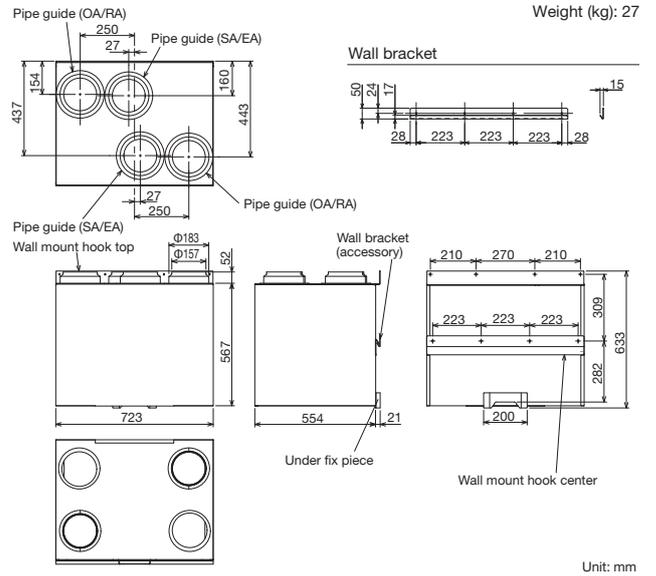
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2. The silencer box is placed on the just after the outlet of the Lossnay unit based on the Installation Manual.
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■ Pressure loss curve

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■ Dimensions

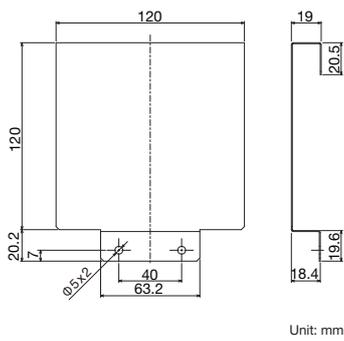


■ Remote Controller Cover

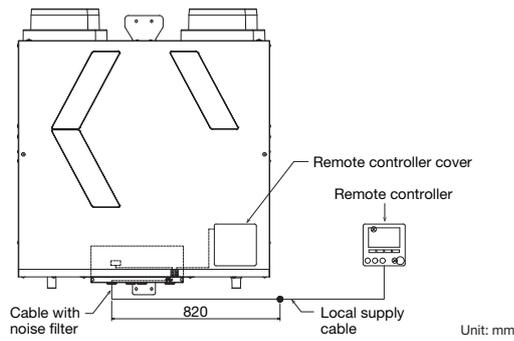
P-RCC-E

By attaching a Remote Controller Cover, the remote controller can be installed at a distance from the unit.

■ Dimensions



■ Configuration



Remote Controller Cover



Cable with Noise Filter
(Cable length outside the product: Approximately 820 mm)

MITSUBISHI ELECTRIC CORPORATION

www.MitsubishiElectric.com