MITSUBISHI ELECTRIC

Lossnay

Vertical Heat Recovery Ventilation

Balanced Pressure Whole Home Ventilation | Made in Japan | Designed for New Zealand Conditions

Introducing – the Vertical Lossnay Range

Mitsubishi Electric has launched the next generation of Whole Home Fresh Air Heat Recovery Ventilation that does not require installation in the attic. While exposed ceilings are great from an architectural aesthetics perspective, it limits the ability to install a traditional roof based ventilation system.

VL-250
Dimensions (WxDxH): 595 x 356 x 565mm

VL-350
Dimensions (WxDxH): 658 x 432 x 623mm

VL-500
Dimensions (WxDxH): 725 x 556 x 632mm

Available in Left and Right Hand Options

Designed for Flexibility and Convenience

The Vertical Lossnay Range is designed specifically for the New Zealand housing market and makes energy efficient, super-quiet ventilation accessible to even more homes. Because of the slimline, vertical upright design, the Lossnay Ventilation System is not limited to an in-roof installation. With its small upright footprint, it can be placed in the garage or utility cupboard. Now whole home ventilation can be installed and integrated in the overall building design without limitations.

Automatic Free Cooling*1 Mode – Summer Bypass

Using the on-board temperature sensors, the Vertical Lossnay automatically enters Bypass Mode when it detects the outside air is cooler than the desired set temperature inside the home.

As a result, cooler fresh air is introduced and stale air is extracted, both bypassing the Lossnay Core. This is ideal for cooling down a dwelling that may have overheated during the day once the outside temperature has dropped in the evening.

Precision Airflow Control

The Vertical Lossnay Range allows airflow to be commissioned in precise 1% Fan Speed Increments*2. The result? Unmatched flexibility to fine-tune tailored ventilation performance to suit a wider range of homes, ensuring optimal comfort, energy efficiency and indoor air quality.

Boost Mode

Boost Mode provides a temporary increase in fan speed in order to quickly refresh indoor air – particularly useful for removing odours, excess moisture, or airborne irritants. Boost Mode can be activated via Wi-Fi Control (automatically running for 15 minutes) or via volt-free contact (selectable run time of between 5 minutes and 120 minutes).

Make Heat Recovery Ventilation Visible – with Advanced Lossnay Wi-Fi Control

ADVANCED Wi-Fi CONTROL

Elevating air quality and maximising energy efficiencies has never been easier, because now the power is in your hands.

See by how many degrees*3 Lossnay is pre-warming or pre-cooling the incoming fresh air in real time, helping you save on your power bill because less additional heating or cooling is required to get a room to the desired temperature.

And in summer, monitor by how many degrees Lossnay reduces the average temperature in your home, using Automatic Free Cooling*1 Mode.

The app will also proactively remind you when it is time to clean your filters to maximise both cost efficient operation and health benefits.

Lossnay Wi-Fi Control truly is the smart evolution in fresh air ventilation.

*1 In comparison to using a dedicated cooling device. The unit will continue to use a small amount of power to bring colder fresh air from outside.

*2 From 25% to 100% Airflow Increments.

*3 The outside 'Fresh Air' and the inside 'Avg Temp' air temperatures are measured by the built-in sensors that are centrally located in the main Lossnay Ventilation unit.

Note: All images are for illustrative purposes only.

Fresh Air Heat Recovery Ventilation

Advanced Filtration for Better Health and Wellbeing

The quality of indoor air is an important factor for health and wellbeing and the Vertical Lossnay Range ensures there is a constant flow of fresh air into our homes, and that potentially harmful pollutants and chemicals are being removed at the same time.

The Vertical Lossnay Range comes with a range of optional filtration upgrade options. Now you can choose from Standard-efficiency (G4), Medium-efficiency (PM10), High-efficiency (PM2.5) or NOx (nitrogen oxide) Filtration options, with an easy to access, unique third filter pocket for housing these additional filtration options.

This means that homes in even the most polluted environments can be supplied with clean, healthy air. Furthermore, the inbuilt filters are easily accessible for regular maintenance.

Energy Efficient Operation

Ventilating our indoor spaces is more important than ever, but we also need to be as energy efficient as possible. The Vertical Lossnay will deliver filtered indoor air whilst recovering energy to minimise waste.

In fact, Lossnay's unique heat recovery technology recovers up to 92%[*4] of the heat energy from the outgoing stale air which is then used to pre-warm incoming fresh air.

Ventilation and Airtight Building Design

Creating a healthy living environment is important when renovating or building a new home – you will want the perfect indoor climate year-round. In addition to efficient heating and cooling, this should include the optimum amount of fresh air.

Current building regulations now demand homes to be built more airtight as they are subjected to higher insulation standards. The option of leaving doors or windows open to allow more fresh air to enter is often not the solution from an outdoor noise or security perspective.

Optional Humidity Sensor

NEW release

The Vertical Lossnay Range now allows you to monitor and alleviate indoor relative humidity levels within your home[*5]. A user-defined threshold (between 50% and 90%) can be set, with the system intuitively boosting airflow when this threshold has been exceeded. The result? Consistent, effective ventilation and relative humidity alleviation.

Optional CO_2 Sensor

NEW release

Through the addition of optional P-09CSW-E wall-mounted CO_2 sensors, the Vertical Lossnay Range is now equipped to continuously monitor carbon dioxide levels (detection range of 0ppm – 2000ppm[*6]), promoting a healthy and comfortable indoor environment, intuitively. The system will automatically detect and adjust your Lossnay system's airflow to ensure stale, stuffy air is removed and replaced with fresh outdoor air – without compromising energy efficiency. The result? Maximised indoor air quality, fresher air and a smarter, more responsive and efficient ventilation system. The P-09CSW-E sensor offers simple installation and set-up, meanwhile CO_2 levels are visible on the Lossnay controller or the Wi-Fi Control App.

*4 VL-500 on lowest fan speed in winter conditions.

*5 Optional P-09HSD-E Duct-mounted Humidity Sensor required.

*6 Measures the CO_2 concentration around the location where the CO_2 sensor is installed. Measurement accuracy may vary depending on the usage environment, installation conditions, etc.

The Lossnay Difference

Ventilating your home is vital as it maintains air quality and reduces moisture, creating a healthier and more comfortable environment. The Mitsubishi Electric Lossnay System is a patented heat recovery ventilation solution that uses fresh air (not attic air) to ventilate your home. The system works by extracting stale air from inside your house and replacing it with allergen-reduced fresh air from outside.

Furthermore, Lossnay also recovers heat energy from the out-going stale air to pre-warm (or pre-cool) the fresh air being drawn into your home.

Improved Air Quality

By drawing in fresh outdoor air, indoor air quality is improved as high levels of CO_2, odours and other pollutants are removed from your home.

Fresh Air Without Open Windows

Lossnay allows you to have a well-ventilated home without the need to open windows. This improves the safety of your home and family and means outdoor noise is minimised.

Retains Heat

Lossnay's unique Heat Recovery Technology recovers up to 92%[*3] of the heat energy in outgoing air which is then used to pre-warm or cool the incoming fresh air.

Balanced Pressure, No Draughts

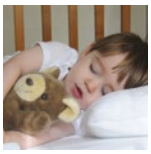
Lossnay is specifically designed for more airtight homes built to the current New Zealand Building Code; delivering the optimum amount of fresh air without creating draughts and minimising indoor temperature fluctuations.

Whisper Quiet Operation

From an ultra quiet 15dB[*5], the Vertical Lossnay is the ideal solution for residential homes and apartments where comfort is key. Enjoy all of the benefits of ventilation without hearing the unit running.

Energy Efficient

Boasting an A+ efficiency rating, incoming fresh air is pre-warmed so your heating system isn't required to work as hard to reach a desired temperature. This is highly energy efficient, and can help reduce heating bills.



Creates a Healthier Home

Filtered fresh air improves air quality for allergy and asthma sufferers.

Assists with Moisture and Condensation Control

Effectively reduces moisture in your home by directly removing stale air that causes condensation.

Easy Control At Your Finger Tips

An intuitive controller with easy-to-read LCD display comes mounted as standard. Fan speed, night set back and 24-hour and weekly timers can easily be customised and programmed with multiple stop and start patterns per day.

Easy To Clean

The standard filters can be removed for regular cleaning to keep the unit in optimal working condition.

[*3] VL-500 on lowest fan speed in winter conditions.

[*5] On fan speed 1. Sound pressure level at 3m.

Why Outside Air, Not Attic Air?

Not all air is created equal. Lossnay only draws fresh air from the outside – it does not draw air from the attic.

The absence of significant air movement common in attics means the air is likely to be stale. In addition, build-up of dust, dirt and other contaminants such as mould, insect and rodent droppings makes this air much harder to filter before it is distributed through your home.

This is why the Balanced Pressure Lossnay System specifically utilises direct fresh air instead.

The Lossnay Core

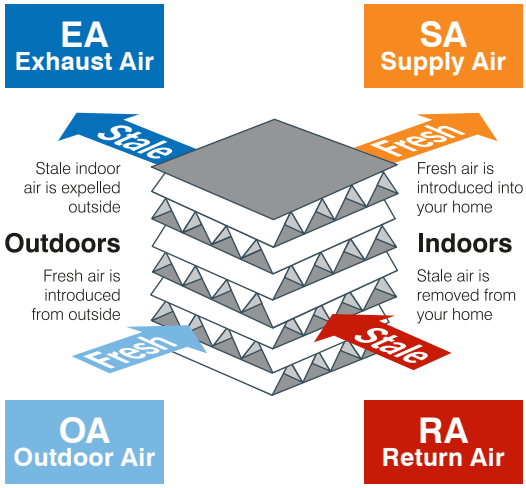
The Balanced Pressure Lossnay Heat Recovery Ventilation System removes stale, dirty air and draws in fresh air from outside. Lossnay also recovers heat energy from the air being transferred to pre-warm (or pre-cool) the fresh air being drawn into your home. Lossnay is ideal for small to large sized homes between 52m^2 and 400m^2.

RA The stale air extracted from your home is Return Air (RA). Return Air can contain high levels of CO_2, odours and other pollutants. This Return Air stream also contains heat energy that Lossnay can recover, which is not the case with positive pressure ventilation systems.

EA As the stale Return Air is removed, the Lossnay Core 'recovers' the useful heat energy from it. The air is then exhausted (EA) outside along with the unwanted pollutants.

OA Outdoor Air (OA) is introduced to provide fresh air. It is first filtered, then passed through the Lossnay Core. This allows it to be pre-heated in winter (or pre-cooled in summer) using the energy recovered from the Return Air.

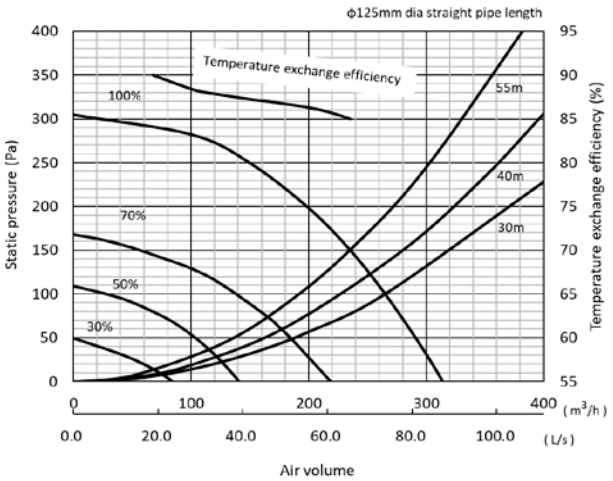
SA Supply Air (SA) then enters your house as fresh pre-heated or pre-cooled air.



Specifications

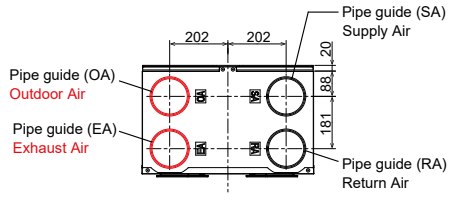
Model		VL-250CZPVU2-L/R-EG			
Electrical Power Supply		220–240V / 50Hz			
Ventilation Mode		Heat Recovery Mode			
Heat Exchanger Type		Sensible Heat Exchanger			
Fan Speed		**FS4**	**FS3**	**FS2**	**FS1**
Running Current	A	0.78	0.36	0.21	0.13
Input Power	W	107.5	44.5	23.5	12.5
Air Flow	m^3/h	235	165	114	68
	L/s	65.3	45.8	31.7	18.9
External Static Pressure	Pa	150	74	38	14
Temperature Exchange Efficiency	%	85	87	88	90
Sound Pressure Level at 3m	dB	31	22.5	16	15>
Energy Efficiency Class (ErP)		A+			
Weight	kg	25			
Dimensions (HxWxD)	mm	565 x 595 x 356			

VL-250CZPVU2-L/R-E Performance Characteristic Curve

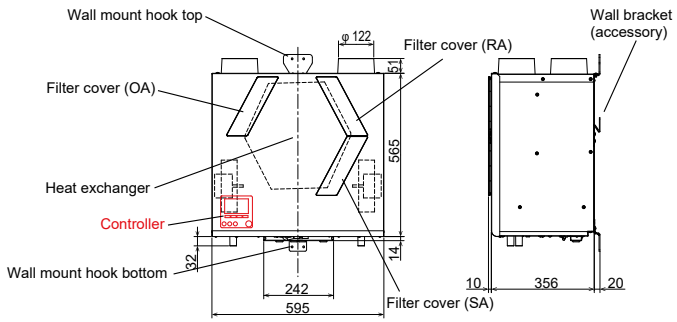


VL-250CZPVU2-L-E

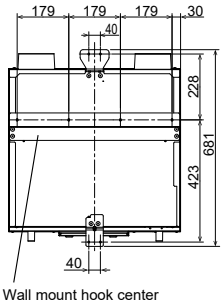
Left sided Outdoor Air (OA) and Exhaust Air (EA) connections



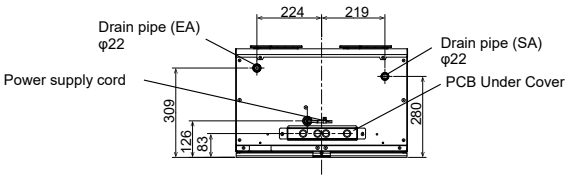
Top View



Front View **Side View**



Rear View

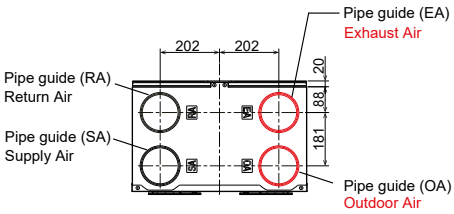


Unit (mm)

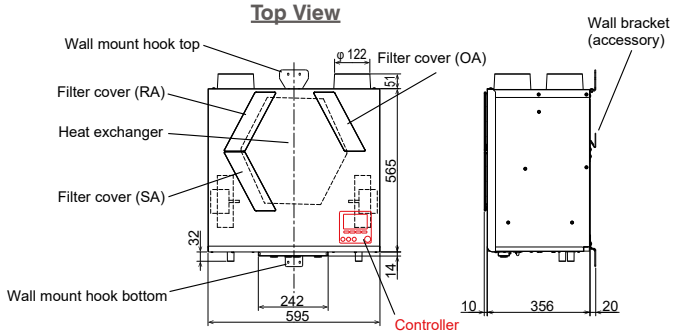
Bottom View

VL-250CZPVU2-R-E

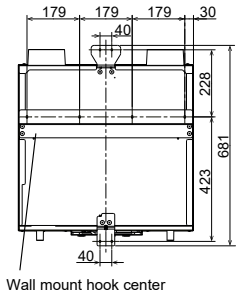
Right sided Outdoor Air (OA) and Exhaust Air (EA) connections



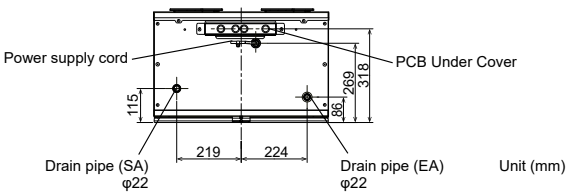
Top View



Front View **Side View**



Rear View



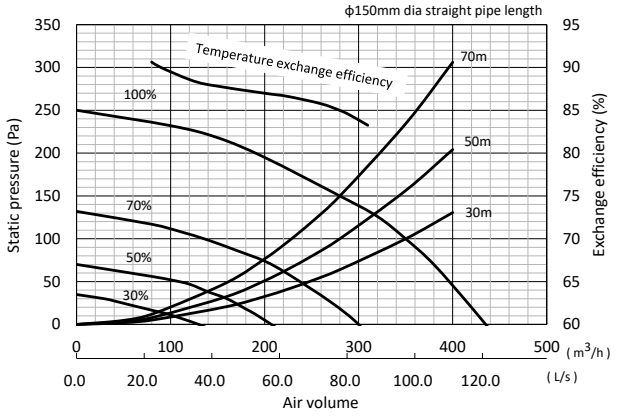
Unit (mm)

Bottom View

Please note: When deciding on the best place to position the Lossnay Ventilation System, care needs to be taken to not have incoming air intake near or close to a wood burner flue.

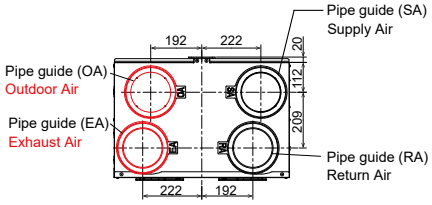
Model		VL-350CZPVU2-L/R-EG			
Electrical Power Supply		220–240V / 50Hz			
Ventilation Mode		Heat Recovery Mode			
Heat Exchanger Type		Sensible Heat Exchanger			
Fan Speed		**FS4**	**FS3**	**FS2**	**FS1**
Running Current	A	1.00	0.50	0.30	0.18
Input Power	W	138	63	34	19
Air Flow	m^3/h	280	200	140	90
	L/s	77.8	55.6	38.9	25.0
External Static Pressure	Pa	150	74	38	14
Temperature Exchange Efficiency	%	85	87	88	90
Sound Pressure Level at 3m	dB	35	26	20	15>
Energy Efficiency Class (ERP)		A+			
Weight	kg	32			
Dimensions (HxWxD)	mm	623 x 658 x 432			

VL-350CZPVU2-L/R-E Performance Characteristic Curve

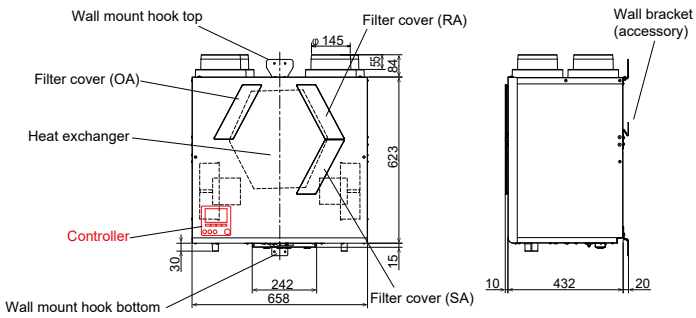


VL-350CZPVU2-L-E

Left sided Outdoor Air (OA) and Exhaust Air (EA) connections

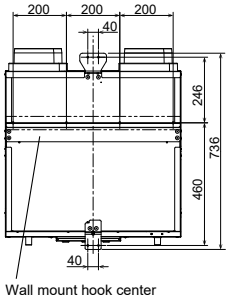


Top View

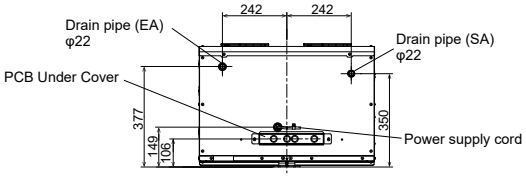


Front View

Side View



Rear View

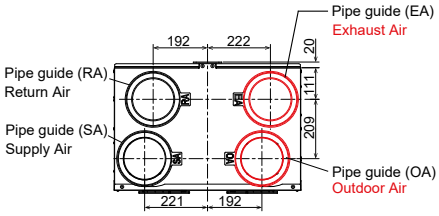


Unit (mm)

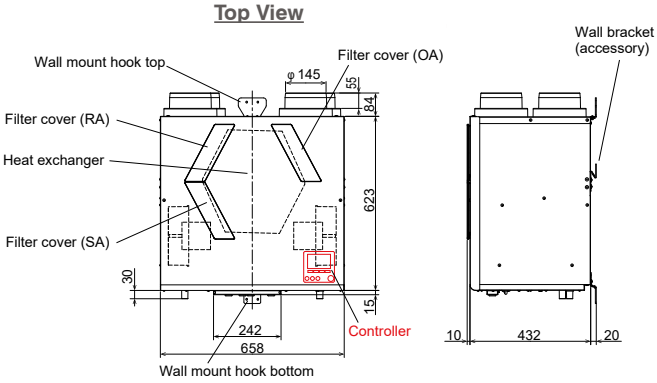
Bottom View

VL-350CZPVU2-R-E

Right sided Outdoor Air (OA) and Exhaust Air (EA) connections

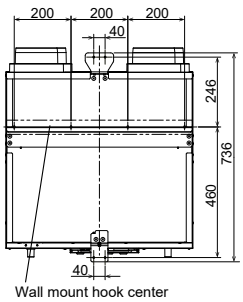


Top View

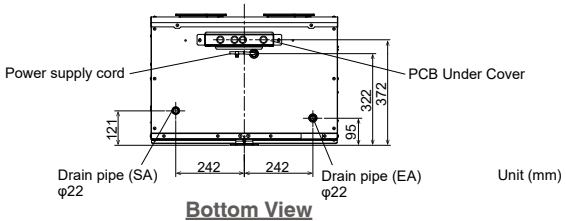


Front View

Side View



Rear View

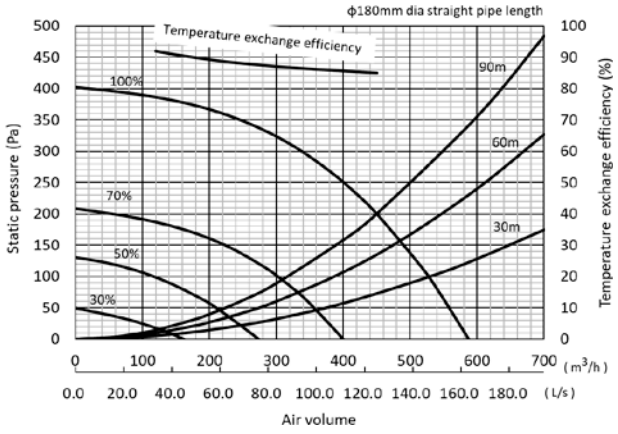


Unit (mm)

Bottom View

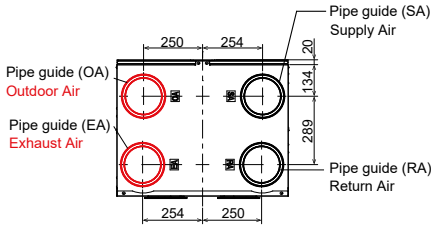
Model		VL-500CZPVU2-L/R-EG			
Electrical Power Supply		220–240V / 50Hz, 220V / 60Hz			
Ventilation Mode		Heat Recovery Mode			
Heat Exchanger Type		Sensible Heat Exchanger			
Fan Speed		**FS4**	**FS3**	**FS2**	**FS1**
Running Current	A	1.69	0.77	0.40	0.20
Input Power	W	255	104	49	21.5
Air Flow	m^3/h	450	305	210	120
	L/s	125.0	84.7	58.3	33.3
External Static Pressure	Pa	200	98	50	18
Temperature Exchange Efficiency	%	85	87	89	92
Sound Pressure Level at 3m	dB	37	29	22	15>
Energy Efficiency Class (ErP)		A+			
Weight	kg	39			
Dimensions (HxWxD)	mm	632 x 725 x 556			

VL-500CZPVU2-L/R-E Performance Characteristic Curve

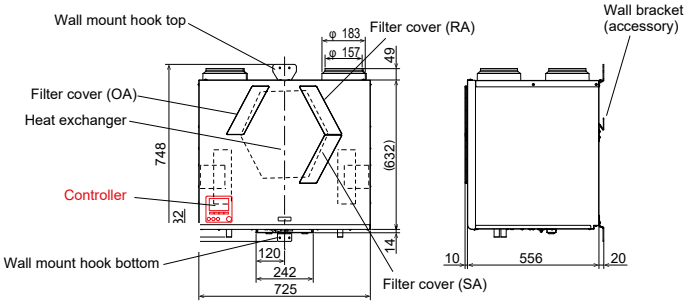


VL-500CZPVU2-L-E

Left sided Outdoor Air (OA) and Exhaust Air (EA) connections

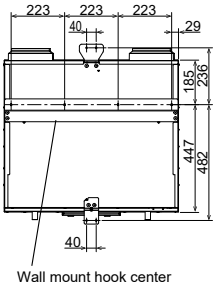


Top View

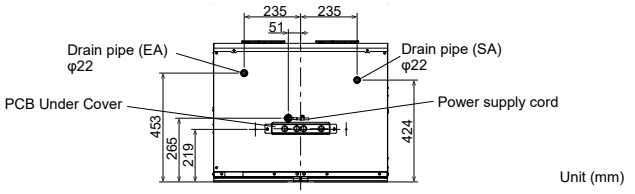


Front View

Side View



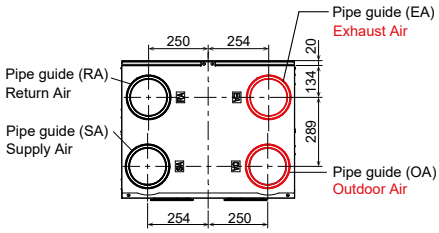
Rear View



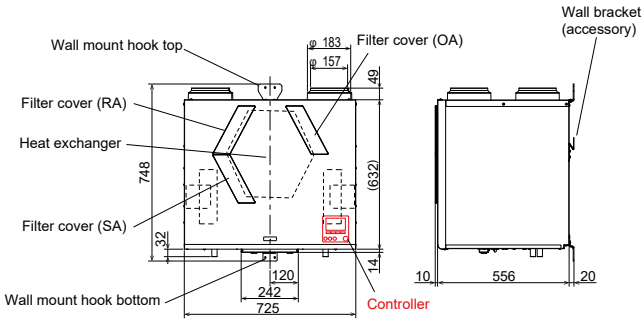
Bottom View

VL-500CZPVU2-R-E

Right sided Outdoor Air (OA) and Exhaust Air (EA) connections

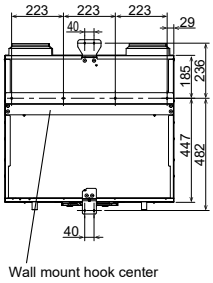


Top View

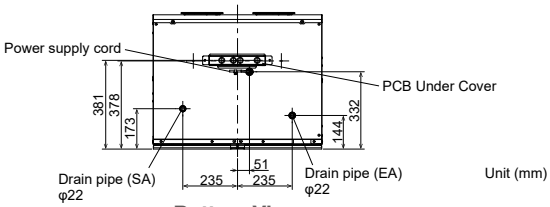


Front View

Side View



Rear View



Bottom View