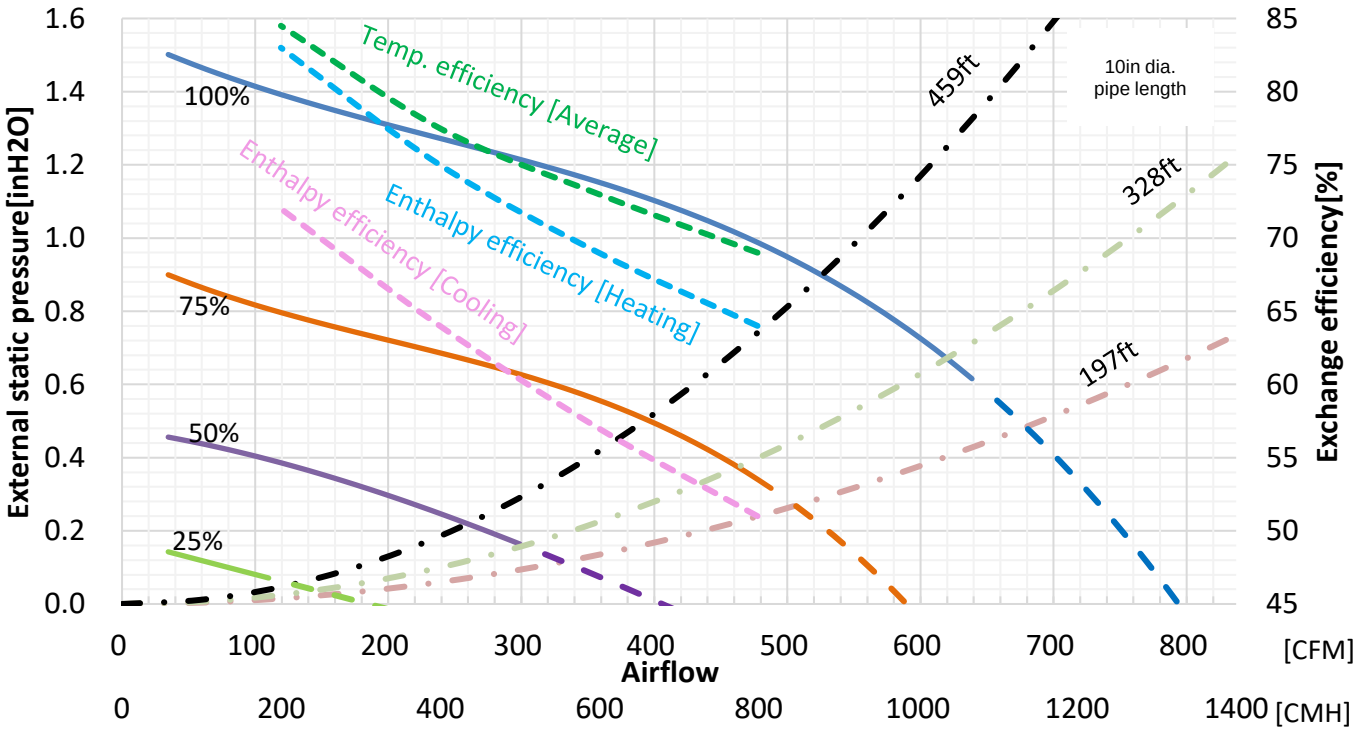
MODEL	LGH-F470RVX2-E	SIGN	

Heat exchange system		Energy recovery ventilator				
Heat exchanger material		Special treated paper plate heat exchanger				
Cladding		Galvanized steel sheet				
Heat insulation material		Self-extinguishing urethane foam				
Motor		EC motor				
Blower		9 5/8 in. (245mm) diameter centrifugal fan				
Filter		Non-woven fabrics filter (MERV7)				
Surrounding air condition		Shall be between 14°F(-10℃)and 104°F(+40℃), 80%RH or less				
Suction air condition		Shall be lower than 104°F(+40℃), 80%RH				
Supply fan operation under low outdoor temperature		14°F (-10°C) to 5°F (-15°C) : Intermittent operation 10 min OFF,60 min ON . 5°F (-15°C) or less : sensing operation 55 min OFF, 5 min ON.				
Function		Heat recovery ventilation/ Bypass ventilation, Fan speed 1,2,3,4				
Weight		110lbs (50kg)				
Electrical power supply		Single phase 208-230V 60Hz				
Ventilation mode		Heat recovery mode				Test condition
Fan speed		100%	75%	50%	25%	
Input power	[W]	425	220	110	47	
Air flow	[CFM]	470	353	235	118	ISO 16494
	[m^3/h]	799	599	399	200	Exchange efficiency temperature and humidity
Specific fan power	[W/CFM]	0.90	0.62	0.47	0.40	condition in the exchange efficiency is based
External static pressure	[InH_2O]	1.00	0.56	0.25	0.06	on AHRI 1060 condition.
	[Pa]	250	141	63	16	
Exchange efficiency [%]	Temperature	69.0	73.0	77.5	84.5	
	Enthalpy Heating	64.0	69.0	75.0	83.0	
	Enthalpy Cooling	51.0	57.0	64.0	72.0	
Noise	[dB]	40.0	34.0	26.0	20.0	
Insulation resistance		10MΩ or more				
Dielectric strength		AC 1000V 1 minute				
Maximum current	[A]	4.05				
Inrush current	[A]	6.1A @10ms, 3.6A@100ms				

■Characteristic curve

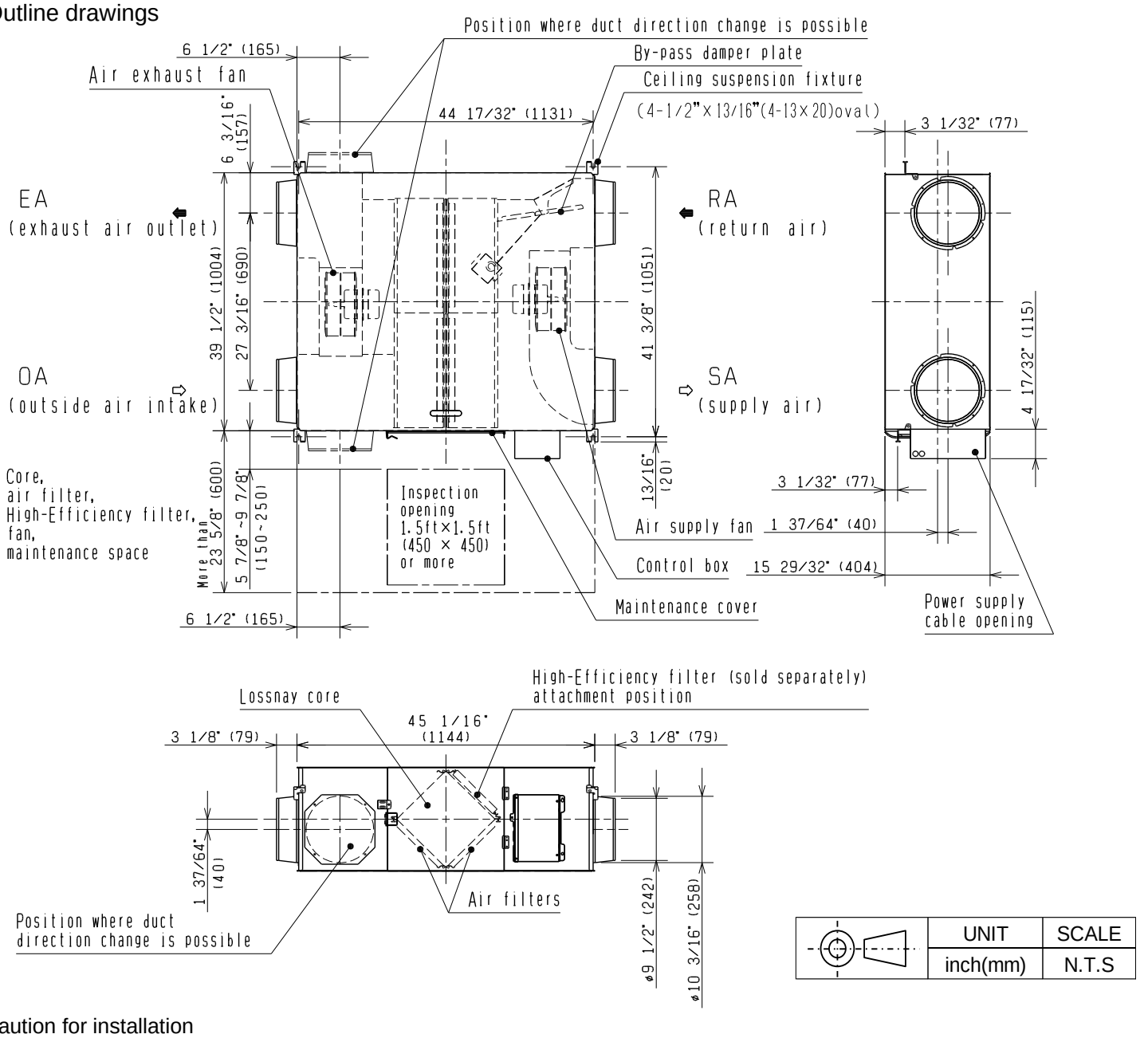
Dotted lines of fan curve means unmeasurable area with ISO16494.



1. The running current, the input power, the efficiency and the noise are based on the rating air volume. The noise is measured at 59in (1.5m). under the center of the unit in an anechoic chamber.
2. Temperature exchange efficiency (%) is an average of heating and cooling.
3. Heat recovery ventilation mode starts automatically while detecting OA temperature lower than 47° F (8℃), even Bypass mode is selected. Remote controller continues to display "Bypass ventilation" in this case.
4. It is prohibited to use the unit where salt, sulphur or hot spring steam damage is expected.
5. Do not use with acid, alkalis, organic solvent, oil mist, paint, or harmful gas as pesticide, corrosive gas, etc.
6. In cold area or strong wind area, outdoor air may enter the unit because of the pressure difference or external wind even when the unit stops. It is recommended to install an electrically damper to block outdoor air in such cases.
7. Avoid to install air inlets and outlets where insects are likely to gather like a place near interior or exterior lights. In that case, select hoods or louvers which have repellent net.

※Specification may be subject to change without notice.

■Outline drawings



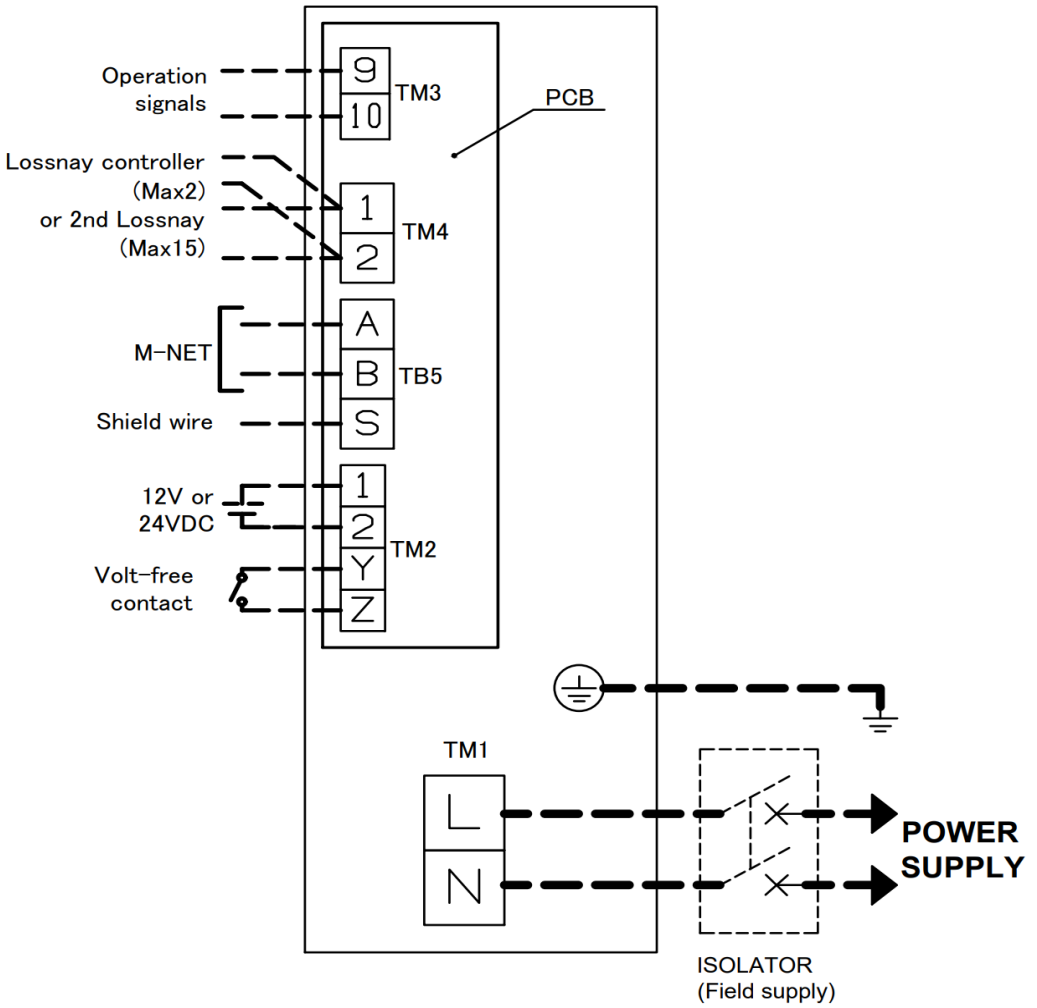
UNIT	SCALE
inch(mm)	N.T.S

■Caution for installation

1. Do not modify the unit as it may cause malfunction.
2. Install the anchor bolts to ensure the product's weight or earthquake load. Correctly rated wire/chain may also be used.
3. Leave sufficient space and make inspection opening (450×450mm or more) for the filter and Lossnay core removal side for maintenance purpose.
4. Take care in locating air inlet to prevent intake of dirty air or disgusting smell from exhaust gas of factory, air from rubbish disposal, etc.
5. Take care as below to prevent from condensation.
   ①The outdoor side (OA, EA) ducts must be heat-insulated in order to prevent from condensation.
   ②If the ambient temperature around the Lossnay unit is close to outdoor condition, it is recommended to insulate RA and SA ducts and additional insulation foam on the unit surface.
   ③Condensation and freezing may occur on the Lossnay unit surface or inside the Lossnay unit, because of the outdoor air condition or humidity condition above the ceiling. A supplemental insulation foam for the unit surface is necessary in that case.
   ④When the supply air is set twice as much as the exhaust air or more by airflow function, the Lossnay body indoor side and SA duct must be put additional insulation. Without additional insulation, it could cause condensation and water drop from the unit.
6. Do not install this product in a place where it is exposed to ultraviolet light. UV may be damage covering insulation.
7. Outdoor air may enter the Lossnay owing to the pressure difference between indoor and outdoor or external winds even when the product is not operated. It is recommended to install an electrically operated damper to block the outdoor air.
8. Install louvers or covers for OA inlet & EA outlet to prevent rainwater from entering the Lossnay unit.
   The outdoor side duct (OA and EA) shall decline by 1/30 or more downward to outdoor.
9. When RA duct is not installed and RA is suctioned directly from the unit surrounding space, a repellent net is necessary for the RA inlet to prevent large size dust or something from intruding into the unit.
10. Take precautions when using the product in a quiet location.
11. Do not use under high temperature and humidity condition. Condensation will occur and water will gather inside the Lossnay cores under high temperature and humidity condition, such as warm swimming pool, bathroom, greenhouse or foggy place.

※Specification may be subject to change without notice.

■Wiring diagrams



■Caution for electrical work

1. Make sure to ground and install an all-pole electrical leakage isolator securely.
2. Select proper circuit breaker according to the electrical current on the 1st page.
3. Perform electrical installation to meet appropriate regulations and standards.
4. Always use double insulated cable for the transmission cables.
5. Wiring work must be performed by qualified professionals.
6. All supply circuits must be disconnected before obtaining access to the terminal devices.
7. When only Lossnay units are used in M-NET, power supply unit is required to connect to centralized controller. Number of power supply units or the transmission boosters should correspond with the connected Lossnay units.
8. In the case of installing a duct heater interlocked with Lossnay, be sure to observe the following:
   ①Choose a OA pre-heater which can control the heater outlet air temperature even both the air flow is maximum and minimum. Otherwise it could fall the supply fan into intermittent operation.
   ② Select a duct heater in compliance with local and national laws, ordinances, and standards. Select a duct heater that is tested by a certification body.
   ③ Always select a heater that is equipped with a non-self-resetting safety device.
   ④ Do not directly supply power from the Lossnay unit to the duct heater. Doing so could cause fire.
   ⑤ Install a circuit breaker for the duct heater in compliance with all applicable laws, ordinances, and standards.
   ⑥ Install the duct heater separated from the product by a distance of 2 m or more.
   ⑦ Ensure that the duct heater and Lossnay are wired and that the Lossnay function settings have been configured, and then always check operation by trial operation.
9. With this product, the wiring installation method will vary according to the design of the system. Refer to the installation manual for more detail.

■Maintenance and lifetime

Remove all dust and dirt on air filters and Lossnay cores at regular intervals to prevent from a deterioration in the Lossnay funct
Refer to each model's operation instructions for the suggested maintenance period and methods.
General indication of lifetime of the main parts is as below. Time below is unrelated to guaranteed period for service. And parts exchange period varies with usage condition.

Lossnay cores	: Around 10 years with maintenance at stated periods.
Air Filters	: Around 5 years with maintenance at stated periods
High efficiency filters	: 3,000 hours
Motor	: 30,000 hours
Circuit board	: 25,000 hours
Thermistor	: 5 years

■Other notes

Refer to each model's operation instructions for the suggested maintenance period and methods. General indication of lifetime of the main parts is as below. Time below is unrelated to guaranteed period for service. And parts exchange period varies with usage condition.

Measurements by pitot tube on site could be as much 20% difference from JIS test room conditions. If the measuring point is close to sources of turbulence like bends, contractions and dampers etc., it is difficult to measure air volume correctly.
A straight duct length more than 10D (D=duct diameter) from the source of turbulence is recommended for correct measurement.
On-site measurement should therefore be measured in accordance with BSRIA guideline (Commissioning Air Systems.
Application procedures for buildings AG3/89.3(2001)).