

# ECOV-X37VA

## Installation Criteria

Please ensure that the installation of the ECOV-X37VA complies with the criteria stated below.



### 1. Refrigeration Duty

The required duty of the system **must** fall within the parameters stated in the tables below.

#### 32°C AMBIENT

Evaporation Temperature (C)	ECOV-X37VA Maximum Duty (kW)	ECOV-X37VA Minimum Duty (kW)
-35	4.00	2.12
-30	5.07	2.69
-25	6.30	3.34
-20	7.67	4.07
-15	9.19	4.87
-10	10.80	5.73
-5	12.40	6.58

#### 35°C AMBIENT

Evaporation Temperature (C)	ECOV-X37VA Maximum Duty (kW)	ECOV-X37VA Minimum Duty (kW)
-35	3.81	2.02
-30	4.82	2.56
-25	5.99	3.18
-20	7.32	3.88
-15	8.79	4.66
-10	10.40	5.52
-5	7.12	3.78

### 2. Required Components

The following components **must** be installed on each ECOV Series Unit.

**Required Components:** Please ensure that the following components are installed with every ECOV series unit.

- Pressure Relief Valve - 80 Bar for ECOV-X37VA
- Liquid Line Sight Glass
- Liquid Line Drier
- (Optional) Swagelok Adapters

**Swagelok Adapters:** (3 of each required per unit).

- B-402-1 ¼ Brass Nut Swagelok
- B-403-1 Brass Ferrule ¼
- B-403-1 Brass Ferrule ¼

### 3. Evaporator Volume

The combined internal evaporator volume **must not exceed 12L**.

### 4. Maximum Working Pressure

The **maximum** working pressure of the ECOV-X37VA is stated below.

**Liquid line =** 80 Bar g (8.0MPa)

**Suction line =** 80 Bar g (8.0MPa)

All the components of the system such as evaporators, cabinets, pipework, expansion valves, shut off valve, etc. **must** be rated to this maximum working pressure . **Please note:** The strength pressure test is carried out to 1.1 times the maximum working pressure.

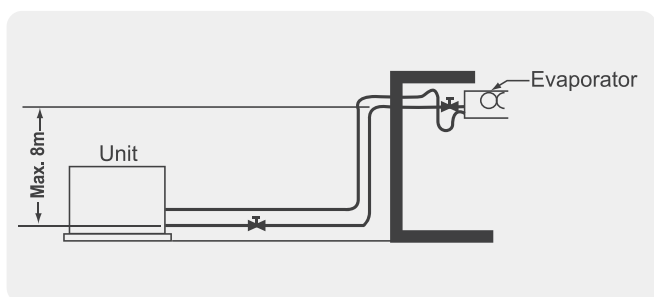
### 5. Pipework Length

The maximum pipework length **must not exceed 50m**.

#### 1: When installing the evaporator above the unit

Keep the height difference (between the end part of the liquid pipe on the unit and the one on the evaporator) **within 8m**.

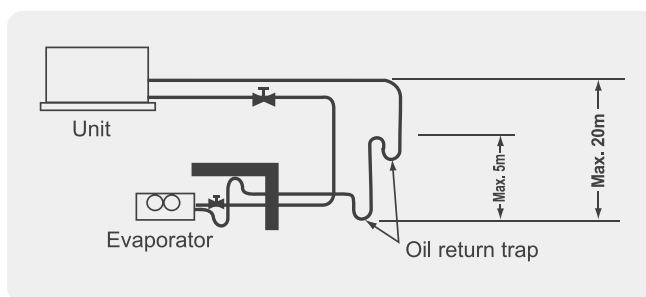
A large height difference may cause a pressure drop due to the head difference of liquid refrigerant, generating flash gas. When the evaporator is installed above the unit.



#### 2: When installing the evaporator below the unit

Keep the height difference (between the highest suction pipe and the lowest suction pipe) **within 20m**.

A large height difference may cause a poor oil return to the compressor, resulting in a compressor failure. Install an oil return trap at **every 5m**.



### 6. Pipework Sizing

The following pipe sizes **must** be used

- 3/8" Liquid and 5/8" Suction

### 7. Expansion Valves

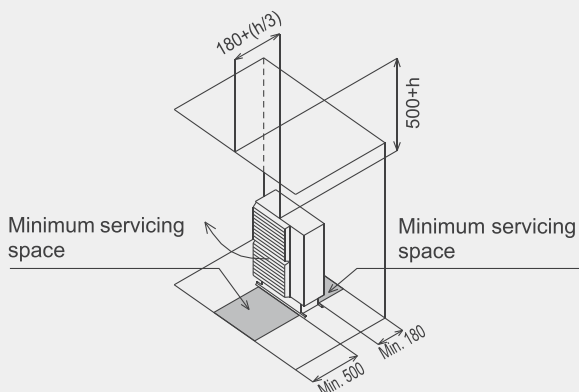
The following expansion valves **must** be used.

**Electronic Expansion Valve (EEV):** A linear expansion valve + stepper such as the Carel E2VCW or CS.

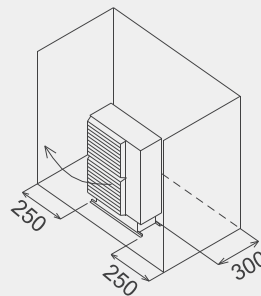
**(NOT** a pulse type like the Danfoss AKV's)

## 8. Required Space

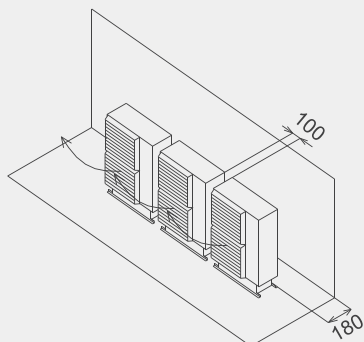
- 1. Installation of a single unit with objects blocking the rear and top of the unit** (unblocked on the sides and at the top).



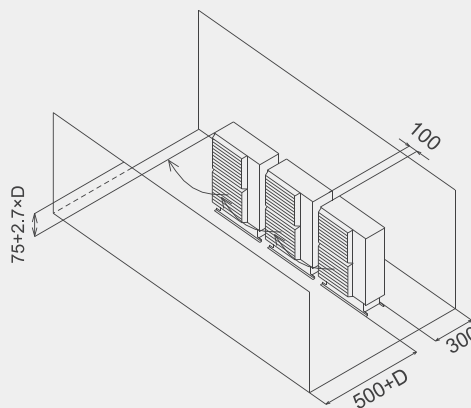
- 2. Installation of a single unit with objects blocking both sides and the rear of the unit** (unblocked in the front and at the top).



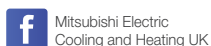
- 3. Side-by-side installation of multiple units with objects blocking the rear of the units** (unblocked in the front, on the sides, and at the top).



- 4. Side-by-side installation of multiple units with objects blocking the rear and front of the units** (unblocked on the sides, and at the top).



Telephone: 01707 282880  
email: [air.conditioning@meuk.mee.com](mailto:air.conditioning@meuk.mee.com)  
[les.mitsubishielectric.co.uk](http://les.mitsubishielectric.co.uk)



UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division, Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England. Telephone: 01707 282880  
IRELAND Mitsubishi Electric Europe, Plunkett House, Grange Castle Business Park, Nangor Road, Dublin 22, Ireland. Telephone: (00353) 1 4198800 Email: [sales.info@meir.mee.com](mailto:sales.info@meir.mee.com) Web: [les.mitsubishielectric.ie](http://les.mitsubishielectric.ie)

Country of origin: United Kingdom - Italy - Turkey - Japan - Thailand - Malaysia. ©Mitsubishi Electric Europe 2025. Mitsubishi and Mitsubishi Electric are trademarks of Mitsubishi Electric Europe B.V. The company reserves the right to make any variation in technical specification to the equipment described, or to withdraw or replace products without prior notification or public announcement. Mitsubishi Electric is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All goods are supplied subject to the Company's General Conditions of Sale, a copy of which is available on request. Third-party product and brand names may be trademarks or registered trademarks of their respective owners.

Note: The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R515B (GWP:292), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). \*These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a hydrocarbon, R290 (GWP:0.02). \*These GWP values are based on IPCC 6th edition.

Effective as of June 2025

