

# ECOV-X15VA

## Refrigeration Condensing Unit - R744 Natural Refrigerant

The **ECOV** Series Refrigeration Condensing units use natural CO<sub>2</sub> refrigerant (R744) and inverter technology to deliver reliable, energy efficient cooling and freezing.

With duties ranging from 1.29kW to 4.497kW at an ambient temperature of 32°C, the units can be connected to multiple refrigerated display cabinets or cold rooms evaporators - making them an ideal choice for smaller retail shops, convenience stores and cold storage rooms in pubs, cafes and restaurants.

**R744(CO<sub>2</sub>)**

### Key Features & Benefits:

- Utilises natural CO<sub>2</sub> refrigerant to help meet key CSR & Net Zero targets
- Wide evaporating temperature range between -45°C & -5°C, meaning units can be used for chilling or freezing
- Use of new 2 stage rotary compressor allows for consistent operation even at high ambient temperatures
- Small footprint of 0.57m<sup>2</sup> and horizontal air flow structure, facilitating installation in small spaces
- Low noise levels for minimal disturbance
- Pre-alarm function enables alarm to be activated when a risk of fault is detected, preventing malfunction and downtime of unit
- Anti-corrosion coating applied as standard to the heat exchanger, protecting against salt damage in harsher coastal environments
- Option of additional three operation modes for easy maintenance and further energy savings
- 25m pipe run allows for installation flexibility
- Direct Modbus connectivity allows the units to easily communicate with various monitoring systems
- Heat recovery port enables rejected heat to be used for minimal space heating and sanitary hot water demand in other areas of the building (requires field sourced plate heat exchanger)



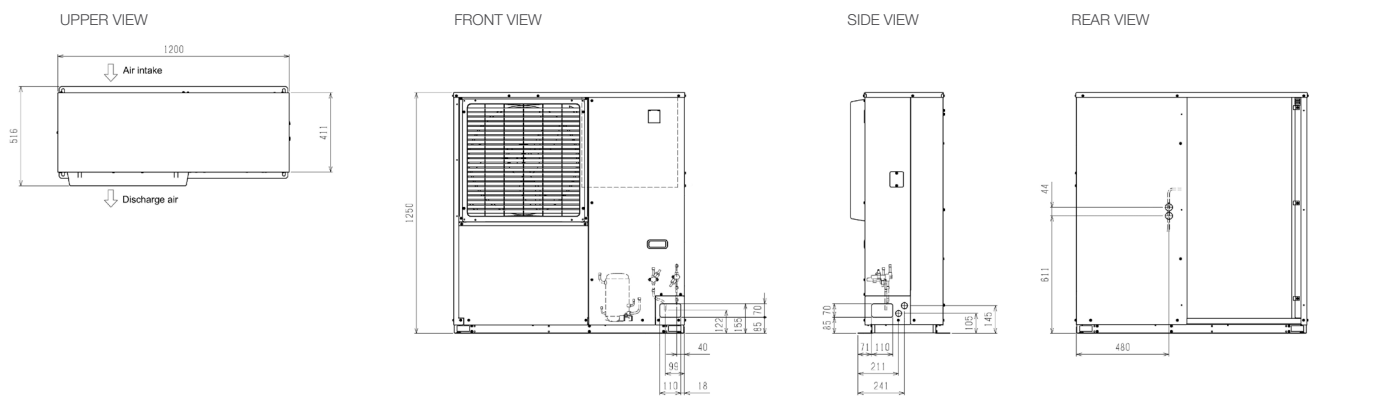


# R744(CO<sub>2</sub>)

MODEL			ECOV-X15VA	
REFRIGERATING CAPACITY	ET = -10°C <sup>1</sup>	kW	4.0	
	ET = -30°C <sup>2</sup>	kW	2.27	
SUCTION PRESSURE SATURATION TEMPERATURE RANGE		°C	-45~-5	
REFRIGERANT TYPE			R744	
INSTALLATION CONDITIONS			Outdoor installation	
			Ambient temperature -25~+43	
POWER SOURCE <sup>1</sup>			Single phase 220-230-240V 50Hz	
ELECTRICAL CHARACTERISTICS	Power consumption <sup>1</sup>	kW	1.9	
	Operating current	A	9.0-8.6-8.2	
	Power factor <sup>1-6</sup>	%	96.5	
	Starting current	A	5.5-5.3-5.1	
OPERATING FREQUENCY		Hz	37~70	
COP			2.1	
COMPRESSOR	Model		C-CV163L0A (Rotary)	
	Crank case heater	W	20	
GAS COOLER	Heat exchanger type		All aluminum flat tube fin	
	Fan	Motor output	W	74 x 1
		Fan diameter	mm	φ550x1
	Air flow rate <sup>8</sup>	m <sup>3</sup> /min		77.4
	Saturation pressure adjustment device			Electronic fan controller
LIQUID RECEIVER	Capacity	L	2.3	
CAPACITY CONTROL			Inverter type	
STARTUP METHOD			Inverter startup	
HIGH-PRESSURE-CUT PREVENTION FUNCTION			Standard	
PROTECTION DEVICE	Pressure switch <high pressure / low pressure>		High pressure: Standard (Mechanical) / Low pressure: Standard (Digital)	
	Over current protection		Standard	
BUILT-IN DEVICE			Suction accumulator (2.0L)	
COMMUNICATION <sup>5</sup>			MODBUS <sup>5</sup>	
DIMENSIONS (Width x Depth x Height)		mm	1,200 x 477 (+39) x 1250	
WEIGHT	Package Weight	kg	125	
	Net Weight	kg	115	
PIPE SIZE	Suction Pipe	mm (in)	φ9.52 (3/8")	
	Liquid Pipe <sup>7</sup>	mm (in)	φ6.35 (1/4")	
MAX PIPING LENGTH (Equivalent)		m	25	
SOUND PRESSURE LEVEL @1m <sup>3</sup>		dB(A)	56	
SOUND PRESSURE LEVEL @10m		dB(A)	36.0	

**Notes:** 1. Measurement conditions are as follows, Ambient temperature: 32°C, Evaporation temperature: -10°C, Compressor operating frequency: /70Hz for ECOV-X15VA(-BS), Fan control: Target condensation temperature = Ambient temperature +5°C. 2. Measurement conditions are as follows, Ambient temperature: 32°C, Evaporation temperature: -30°C, Compressor operating frequency: /70Hz for ECOV-X15VA(-BS), Fan control: Target condensation temperature = Ambient temperature +5°C. 3. Measurement conditions of sound pressure levels are as follows, Ambient temperature: 32°C, Evaporation temperature: -10°C, Measurement location: Distance from the front of the unit 1m, height 1m, Compressor operating frequency: 70Hz for ECOV-X15VA(-BS), Fan control: Target condensation temperature = Ambient temperature + 5°C. 4. A pressure relief device, a sight glass and a dryer must be installed on the liquid pipe. Please procure these parts locally. 5. MODBUS<sup>5</sup> is a registered trademark of SCHNEIDER ELECTRIC USA, INC. in the United States. 6. Power condenser cannot be installed. 7. Use the included reducer to connect the liquid piping. 8. Maximum air flow rate varies with high pressure.

## DIMENSIONS



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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), R290 (GWP:3), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), 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. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of January 2024

