Freedom
Heat Pumps
SALES | SERVICE | SUCCESS

About Samsung Climate Solutions

Samsung Electronics has come a long way since introducing its first air conditioner in 1974. Since entering the European commercial air conditioning market in 2005, we have experienced rapid growth and support for our expanding global operations in climate systems. Samsung Electronics Co., Ltd. opened Samsung Electronics Air Conditioner Europe B.V. in Amsterdam at the start of 2017. In order to achieve mutual growth and success going forward, both the staff at our European headquarters, as well as our local teams strive to provide the best level of service and support to our partners across more than 30 European countries.

It is our mission at Samsung to provide cutting-edge innovations in climate-based initiatives, as well as lasting digital connectivity solutions. Samsung is proud to offer ongoing training, technical support and unique distribution operations, and prides itself on fulfilling the needs of the European market when it comes to cooling, heating, domestic hot water, ventilation and smart building solutions—particularly across retail, hotel, office and home environments.
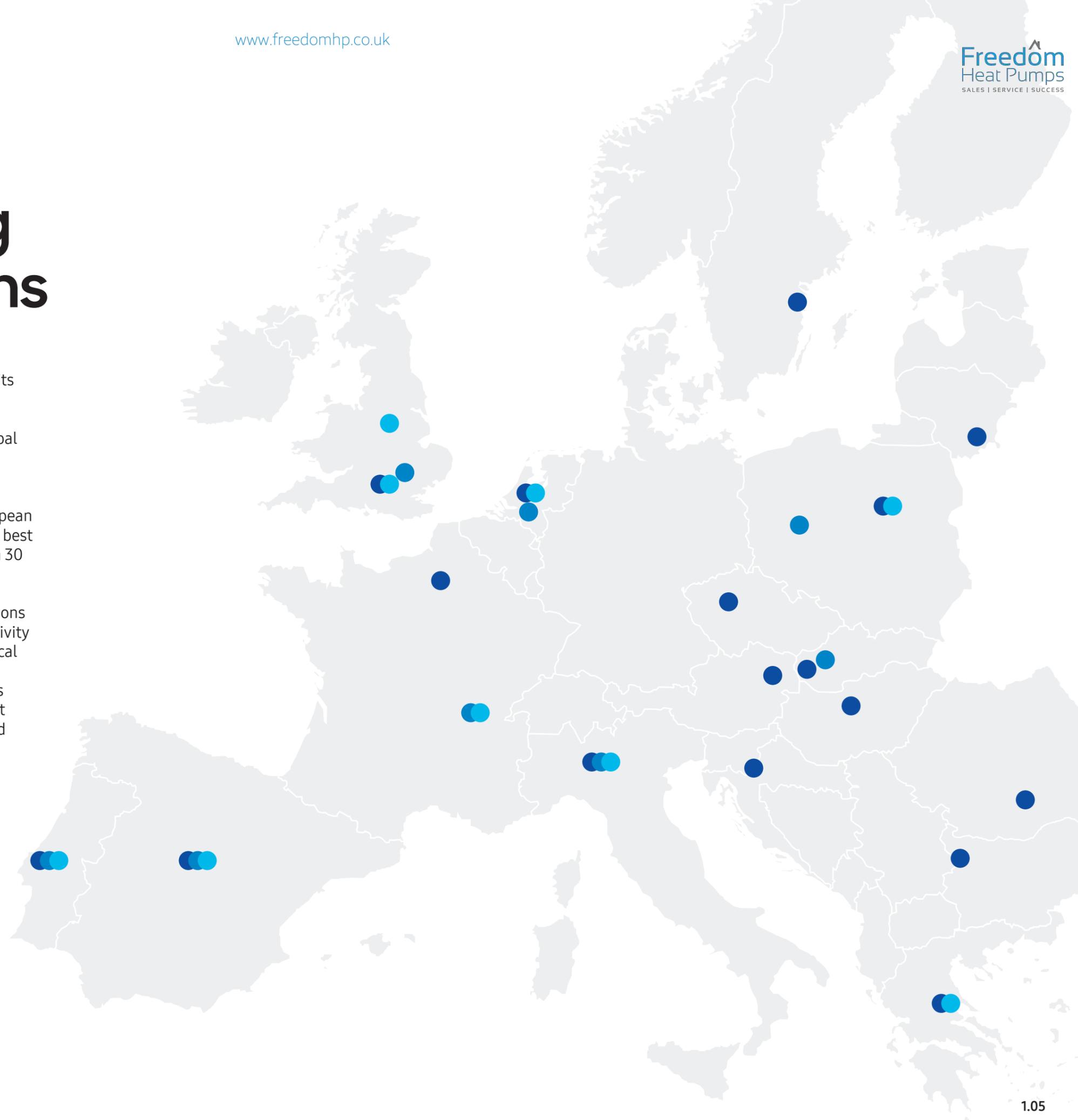
17 Samsung Offices

8 Warehouses

9 Training Centres

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Protecting The Environment

Across its global business operations, Samsung endeavours to comply with European and national laws and regulations, as well as international environmental standards. Samsung actively works towards minimising the generation of harmful materials, utilising resources efficiently, and recycling waste products for the benefit of the environment. Samsung will do its best to conduct environmental improvement activities across all product development, production, distribution, sales and disposal processes.

WEEE: Electronic Waste

Samsung works within the WEEE (Waste of Electrical and Electronic Equipment) regulations, which forms the Directive for extended producer responsibility. This Directive stipulates encourage the safe collection, treatment, recycling and environmentally-sound disposal of all electrical and electronic equipment. Working with collective recycling schemes in each EU member state, Samsung co-finances the take-back and recycling of electronic products.

Packaging

Samsung works together with recycling schemes and governmental organisations to collect, separate and re-use all packaging materials at various points in the distribution chain. Many materials can be recycled into new products and recycling helps to save natural resources. Recycling packaging helps to re-use valuable raw materials and to reduce the overall impact on the environment.

Batteries

Samsung has been giving new life to used batteries by funding collection, treatment and recycling by local battery recycling organisations.

Ecodesign

Samsung complies with the Ecodesign regulations, issued in March 2012, which require air conditioners (<12kW) and comfort fans (<125kW) within the EU to display detailed, highly visible information regarding energy efficiency, plus information on Coefficient of Performance (COP), Energy Efficiency Ratio (EER) and annual energy consumption (kW/h).

Addressing Global Warming With R32 Refrigerant (R32)

Following the introduction of EU legislation on the reduction of F-gas emissions, Samsung presents a new range of Eco Heating Systems across Mono and Split models. These systems feature R32 refrigerant which has a Global Warming Potential (GWP) of 675—a significantly lower GWP than that of R410A (2088).

These new products are more environmentally-friendly than their R410A based predecessors. R32 has 68%* lower Global Warming Potential in comparison with R410A, is non-toxic and easy to recycle. It has an Ozone Depletion Potential (ODP) of zero, a high refrigeration capacity, and thermal conductivity, meaning maximum efficiency and a 30% reduction in charging volume.

* Comparison between R410A and R32 GWP figures as per: reporting from the European Commission.

Environmental impact: R410A compared to R32

■ R410A (HFC): Refrigerants currently used in industrialised countries
■ R32 (HFC): Next-generation refrigerants

Index = 100
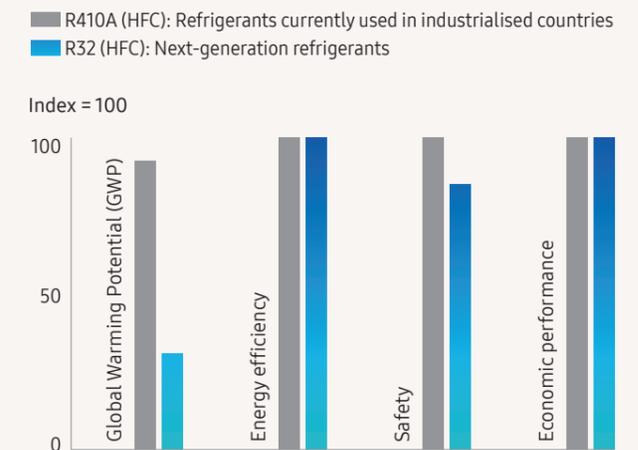
Making Energy Efficiency Clear

The following electrical heat pumps have been subject to Energy labelling EU No 811/2013 and Ecodesign EU No 813/2013 requirements: Space heaters (boiler space heaters, cogeneration space heaters, heat pump space heaters, low-temperature heat pumps, boiler combination heaters, heat pump combination heaters) and Packages (space heater or combination heater + temperature control + solar device).

As of September 2019, the energy efficiency scale has changed as below:

- Seasonal space heating energy efficiency class—the current scale from A++ to G will move to A+++ to D.

- Water heating energy efficiency class for the declared load profile for combination heat pumps—the current scale from A to G will move to A+ to F.

The energy labels should provide the minimum required information such as: supplier's name, product model code, the rated output under three European climates (average, colder and warmer) for medium- and/or low-temperature applications (55 °C and 35 °C), European map displaying the three temperature zones and the sound power level indoors and/or outdoors. In addition, energy labels should also include a pictogram showing combination heat pumps that are only able to operate during off-peak hours.

Energy Label as of September 2019

Heat pump combination heaters
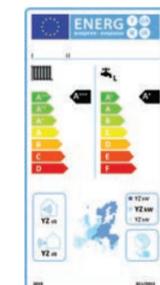
Heat pump space heaters

SAMSUNG
Specifications
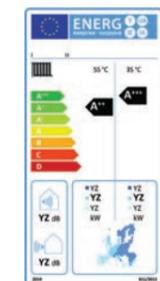
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Mono (R32)

- Intuitive, colour screen touch controller in multiple languages
- Energy monitoring through touch controller
- 2-zone control, suitable for floor heating and radiators

					AE050RXYDEG/EU	AE080RXYDEG/EU	AE120RXYDEG/EU	AE160RXYDEG/EU	AE080RXYDGG/EU	AE120RXYDGG/EU	AE160RXYDGG/EU
Outdoor Unit / **Control Kit**					MIM-E03CN	MIM-E03CN	MIM-E03CN	MIM-E03CN	MIM-E03CN	MIM-E03CN	MIM-E03CN
System	Operation	Nominal Capacity	Heating A7/W35[1]	W	5.000	8.000	12.000	16.000	8.000	12.000	16.000
			Cooling A35/W18[1]	W	5.000	7.500	12.000	14.000	7.500	12.000	14.000
		Power Input (Nominal)	Heating A7/W35[1]	W	1.030	1.770	2.650	3.620	1.770	2.650	3.620
			Cooling A35/W18[1]	W	1.140	1.900	2.770	3.280	1.900	2.770	3.280
		COP (Nominal Heating) A7/W35[1]		W/W	4,85	4,52	4,53	4,42	4,52	4,53	4,42
		EER (Nominal Cooling) A35/W18[1]		W/W	4,39	3,95	4,33	4,27	3,95	4,33	4,27
		Leaving Water Temperature[2]	Heating	°C	15~65	15~65	15~65	15~65	15~65	15~65	15~65
			Cooling	°C	5~25	5~25	5~25	5~25	5~25	5~25	5~25
		Ambient Temperature	Heating	°C	-25~35	-25~35	-25~35	-25~35	-25~35	-25~35	-25~35
			Cooling	°C	10~46	10~46	10~46	10~46	10~46	10~46	10~46
			DHW	°C	-25~43	-25~43	-25~43	-25~43	-25~43	-25~43	-25~43
	Functions	2-Zone Control[3]		-		●	●	●	●	●	●
Outdoor Unit	Power Supply			Φ, V, Hz	1Φ, 220~240V, 50Hz	1Φ, 220~240V, 50Hz	1Φ, 220~240V, 50Hz	1Φ, 220~240V, 50Hz	3Φ, 380~415V, 50Hz	3Φ, 380~415V, 50Hz	3Φ, 380~415V, 50Hz
	Compressor	Type		-	BLDC Twin Rotary	BLDC Twin Rotary	BLDC Twin Rotary	BLDC Twin Rotary	BLDC Twin Rotary	BLDC Twin Rotary	BLDC Twin Rotary
	Base Heater			-	-	●	●	●	-	●	●
	Sound	Sound Pressure[4]	Heating Std	dB(A)	45	48	50	52	48	50	52
			Cooling Std	dB(A)	45	48	50	54	48	50	54
		Sound Power	Heating Std	dB(A)	61	63	64	66	63	64	66
			Cooling Std	dB(A)	62	64	65	68	64	65	68
	Dimensions	Net Weight		kg	58,5	76,0	110,0	110,0	75,0	111,0	111,0
		Net Dimensions (WxHxD)		mm	880 x 798 x 310	940 x 998 x 330	940 x 1,420 x 330	940 x 1,420 x 330	940 x 998 x 330	940 x 1,420 x 330	940 x 1,420 x 330
	Refrigerant	Type		-	R32	R32	R32	R32	R32	R32	R32
		These products contain R32 (GWP=675) which is fluorinated greenhouse gas.									
		Factory Charging		tCO₂e	0,68	0,78	1,49	1,49	0,78	1,49	1,49
				kg	1,00	1,15	2,20	2,20	1,15	2,20	2,20

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

[1] A2W Conditions : (Heating) Water In/Out 30°C/35°C, Outdoor Air °C[DB]/6°C[WB]; (Cooling) Water In/Out 23°C/18°C, Outdoor Air 35°C[DB].

[2] 65°C down to +10°C (max. 60°C down to -5°C)

[3] When combined with external thermostat.

[4] Sound pressure level is obtained in an anechoic room. Sound pressure level is a relative value, depending on the distance and acoustic environment. Sound pressure level may differ depending on operation conditions.

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Specifications

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Mono Control Kit

- Includes remote controller and flow sensor
- Mounting box with the control printed board assembly
- Leaving and return water sensors
- Domestic Hot Water sensor

Model		MIM-E03CN
Compatible With	-	EHS R32 Mono ODU
Power Supply	Ø, #, V, Hz	1, 2, 220-240, 50
External Control	Booster Heater	-	AC 230V (Max 20A)
	Back up Heater (/Boiler)	-	AC 230V (Max 10mA)
	Water Pump	-	AC 230V (Max 0.5A)
	2way(or 3way) Valve	-	AC 230V (Max 22mA)
	Room Thermostat	-	AC 230V (Max 22mA)
	Solar Pump	-	AC 230V (Max 10mA)
	Inverter Pump	-	AC 230V (Max 0.5A)
	3way Mixing Valve	-	AC 230V (Max 22mA)
External Dimension	Net Weight	kg	3.5 (TBD)
	Net Dimensions (WxHxD)	mm	290 x 110 x 370 (TBD)

Mono

Third party
DHW Tank
Wi-Fi Kit
Hot Water
Outdoor Unit
Control Kit
Touch Controller
Zone 1 - Radiator
Zone 2 - Floor Heating
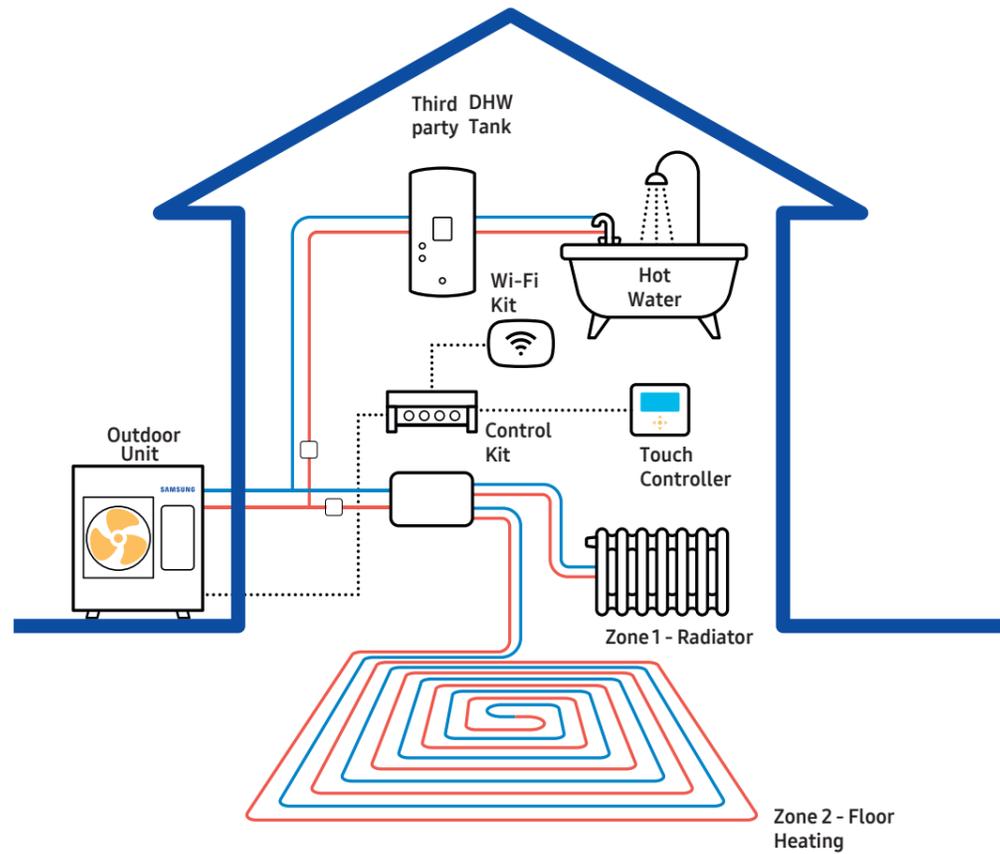
SAMSUNG
Dimensional Drawings

Freedom
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Mono

Mono Control Kit

MIM-E03CN

2-R2.5
2-R4.0
264 [10 3/8"]
371 [1'- 2 5/8"]
342 [1'- 1 1/2"]
359 [1'- 2 1/8"]
2-R5.0

289 [11 7/16"]
110 [4 5/16"]
87 [3 7/16"]
23 [7/8"]
①
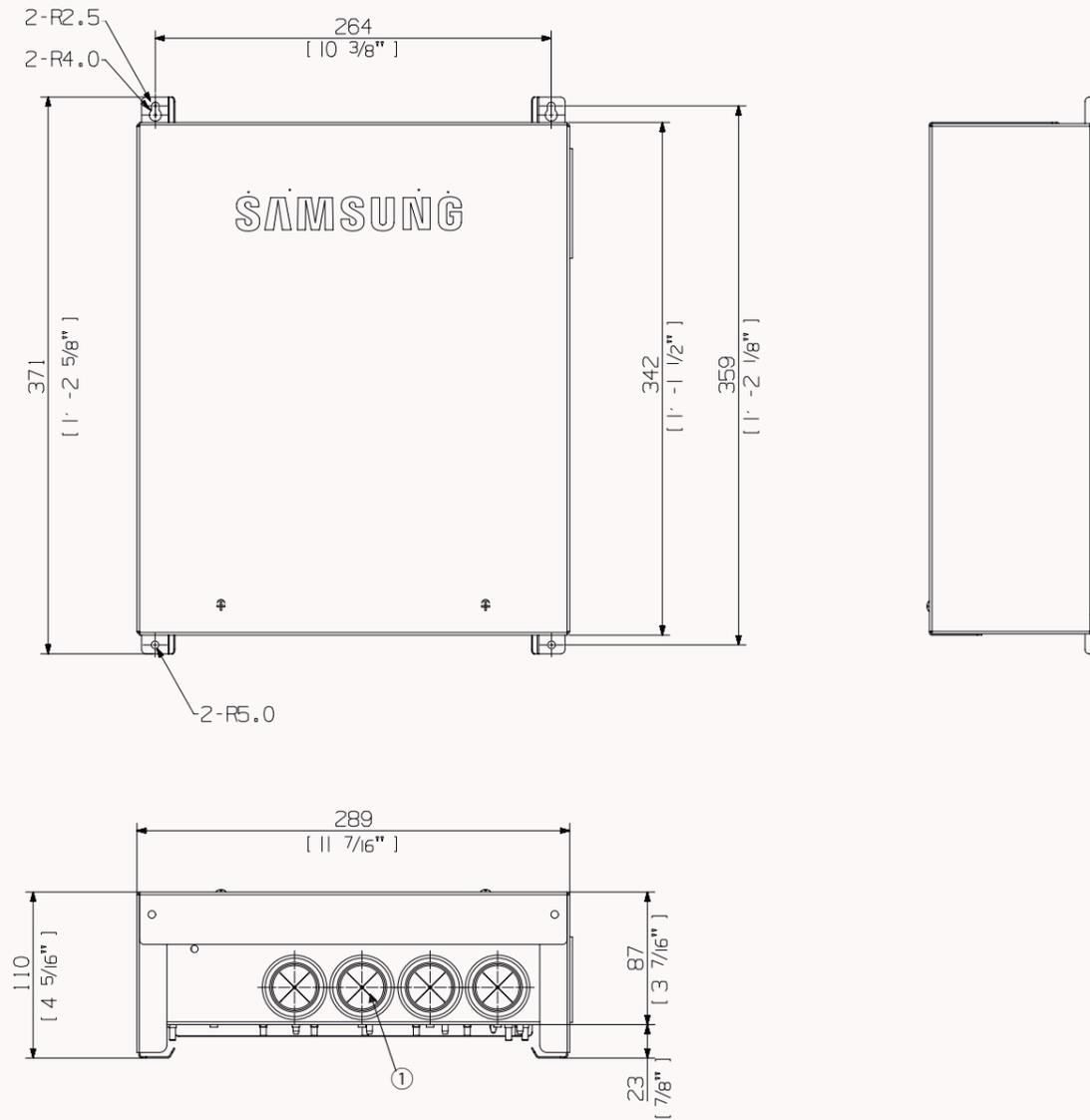
NO	Name
1	Conduit Holes for Wiring (Rubber)

Mono Outdoor

AE050RXYDEG/EU

364 [1'- 2 1/4"]
310 [1'- 1/4"]
880 [2'- 10 3/4"]
798 [2'- 7 7/16"]
310 [1'- 1/4"]
364 [1'- 2 1/4"]
③
497 [1'- 7 1/2"]
227 [9"]
①
②

NO	Name
1	Water Pipe(Out)
2	Water Pipe(In)
3	Power & Communication Wiring Conduit Holes

Dimensional Drawings

Mono Outdoor

Mono

AE080RXYD*G/EU

360 [1' -2 1/4"]
384 [1' -3"]
940 [3' -1"]
330 [1' -1"]
998 [3' -3 1/4"]
384 [1' -3 1/4"]
514 [1' -8 1/4"]
245 [9 3/4"]
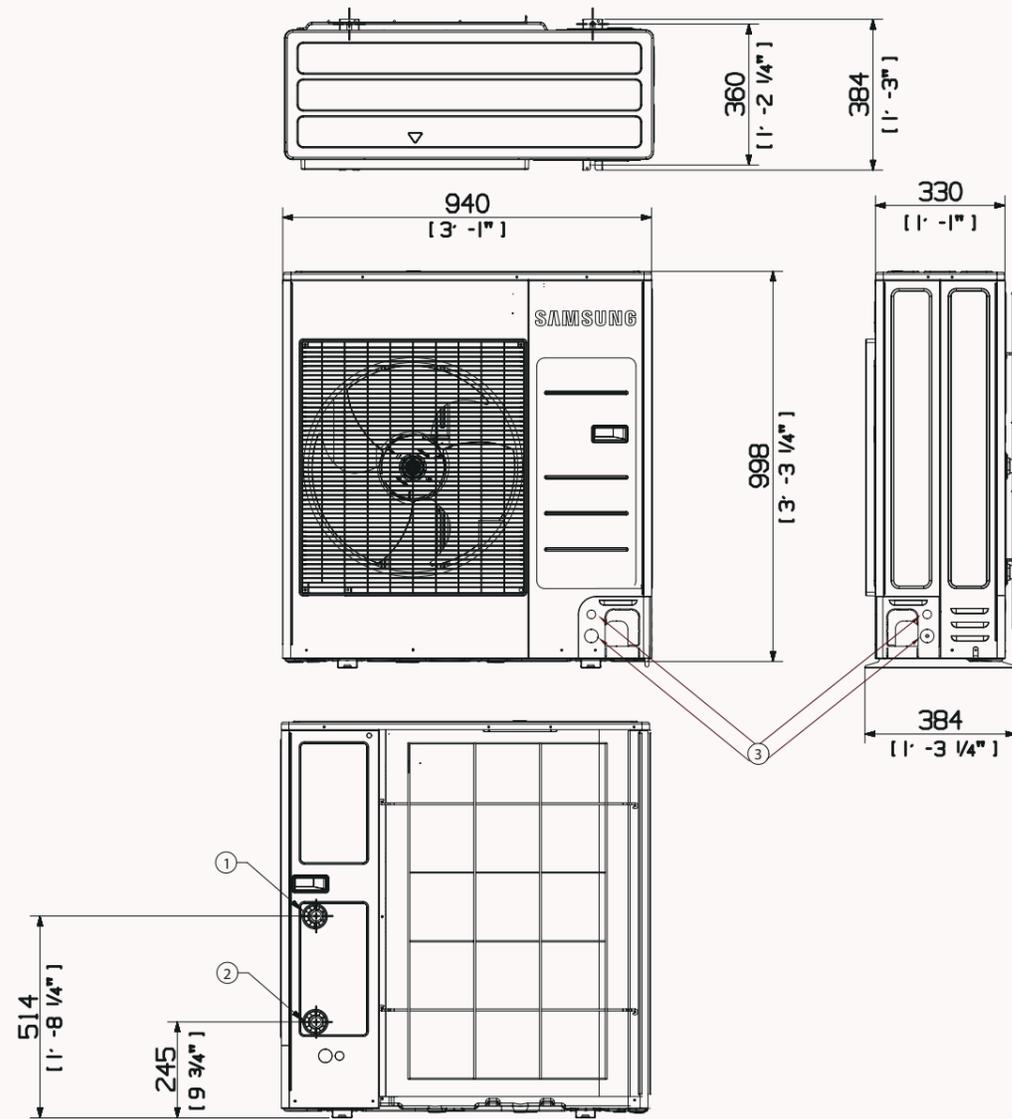
NO	Name
1	Water Pipe(Out)
2	Water Pipe(In)
3	Power & Communication Wiring Conduit Holes

Mono Outdoor

Mono

AE120/160RXYD*G/EU

620 [2' -1/2"]
360 [1' -2 1/4"]
384 [1' -3"]
940 [3' -1"]
330 [1' -1"]
1420 [4' -8"]
384 [1' -3"]
79.5 [3 1/4"]
156.5 [6 1/4"]

NO	Name
1	Water Pipe(Out)
2	Water Pipe(In)
3	Power & Communication Wiring Conduit Holes