



ISO 9001:2015 Certified

# AMC SERIES

## AIR-COOLED CHILLER

*with multiple water piping configurations*



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# OVERVIEW



AMC030



AMC050 - 080



AMC100 - 160



AMC200 - 250



AMC300

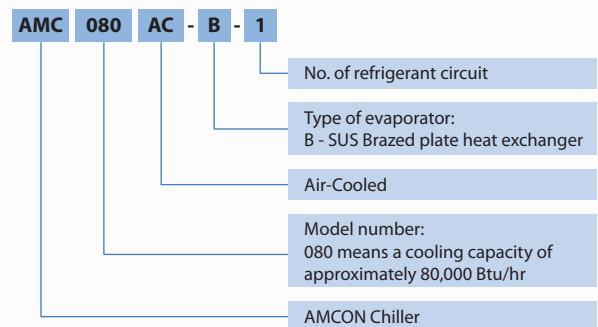
## INTRODUCTION

AMCON focuses on designing, developing, and manufacturing of efficient and reliable chiller units for process cooling purposes as well as air-conditioning applications.

Our AMC Series Air-Cooled Chillers are designed for outdoor (roof or ground level) installation. Each unit consists of hermetic scroll compressor, compact SUS brazed plate heat exchanger as evaporator, large surface copper-tube-aluminium-fins condensing unit, weatherproof condensing fan set, PE insulated fibre reinforced plastic tank, microprocessor based controller, a durable water pump and a weatherproof powder coated casing constructed from heavy gauge galvanized steel.



## UNIT NOMENCLATURE



## APPLICATIONS

Process machinery, welding equipment, die-casting and machine tooling, plastic manufacturing, injection and blow molding, vacuum/rubber molding, food and beverage processing, roller/mixer equipment, laser machinery, printing machinery, paper and cement processing, batching plant, chemical processing, compressed air and gas cooling, laboratory instruments, air-conditioning and refrigeration, power generation plant, etc.



# FEATURES

**Condenser Coil**

constructed from staggered rows of copper tubes and pre-coated aluminium fins. Provides efficient heat rejection.

**SUS Brazed Plate Heat Exchanger**

provides excellent heat transfer. Increases refrigeration capacity and reduces power consumption of the compressor.

**Direct Drive Axial Fan**

which is weatherproof and vibration-free. Delivers high air flow rates with low noise level and low motor power consumption.

**Hermetic Scroll Compressor**

operating at 50Hz. Proven high efficiency, low noise, high reliability design to ensure long lifespan.

**PE Insulated FRP tank**

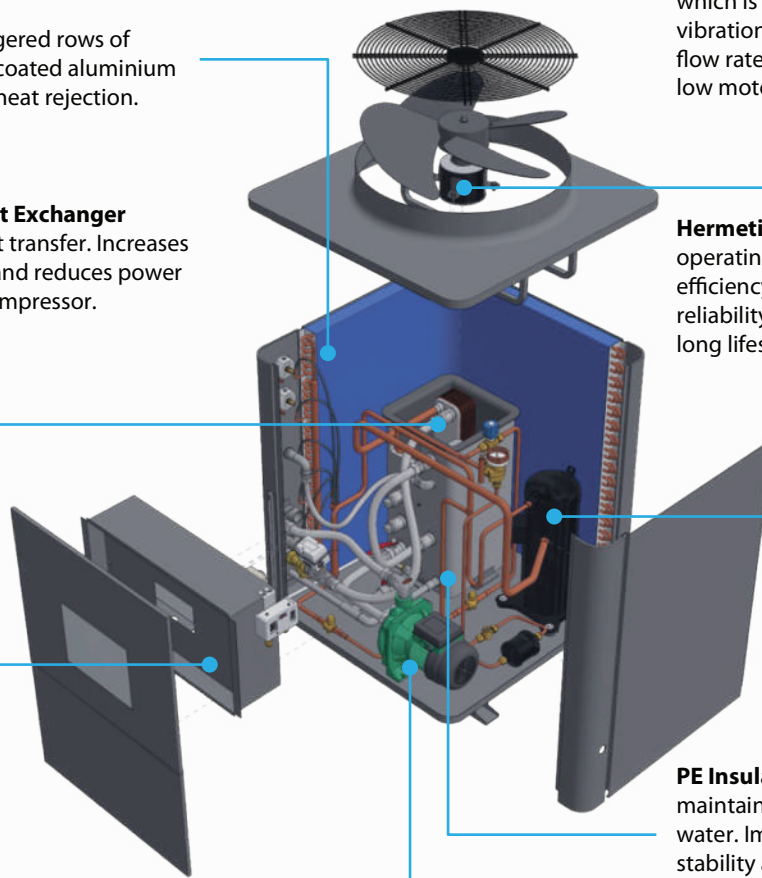
maintains large volume of chilled water. Improves temperature stability and reduces system variability.

**Built-In Water Pump**

and isolating valves to ease chilled water piping work in field.

**Microprocessor Auto Control PC Board**

which can be programmable according to your required parameter (within the manufacturer's limit). Incorporates all the necessary safety protection functions for the chiller unit.



**ECO-FRIENDLY CHILLER**

The R407C refrigerant used in our chiller is a chlorine-free HFC with zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP). It exhibits performance characteristics and thermo-physical properties that are very similar to R22.



**SAFETY PROTECTIONS**

Completed with all the necessary safety protection functions:

- High/low pressure cutout
- Motor overload cutout
- Compressor overload cutout
- Low water flow cutout
- Low water level cutout
- Anti-freeze protection
- Phase-sequence protection



**MULTIPLE CONFIGURATIONS**

There are multiple ways to connect our AMC Series Chiller to your process. Whether you are using an open or closed system, or whether you have your own water pump or water tank (even an underground one), the water piping of our chiller can readily be changed and configured to suit your needs.

# TECHNICAL SPECIFICATIONS

## AMC-AC-B-1 SERIES

MODEL	AMC	030	050	080	100	120	150
<b>NOMINAL COOLING CAPACITY</b>	hp	3	5	8	10	12	15
	Btu/hr	28,800	47,800	78,600	103,000	118,000	150,000
	kcal/hr	7,260	12,050	19,810	25,960	29,740	37,800
	kW	8.4	14.0	23.0	30.2	34.6	44.0
<b>Refrigerant</b>		R407C					
<b>No. of Refrigerant Circuit</b>		1	1	1	1	1	1
<b>COMPRESSOR</b>							
<b>Type</b>		Hermetic Scroll Compressor					
<b>Quantity</b>		1	1	1	1	1	1
<b>Power Source</b>	V/Ph/Hz	380-415V, 3Ph, 50Hz					
<b>Power</b>	kW	2.7	4.46	6.95	8.95	10.15	13.65
<b>Running Ampere</b>	A	4.8	8.4	12.9	16.0	17.6	26.5
<b>EVAPORATOR</b>							
<b>Type</b>		SUS Brazed Plate Heat Exchanger					
<b>Nominal Water Flow Rate</b>	L/min	25.2	42	67.2	84	100.8	126
	m <sup>3</sup> /hr	1.5	2.5	4.0	5.0	6.1	7.6
<b>CONDENSER</b>							
<b>Type</b>		Aluminium Fin – Copper Tube					
<b>Heat Transfer Area</b>	m <sup>2</sup>	30	50	72	90	110	132
<b>CONDENSER FAN</b>							
<b>Type</b>		Weather Proof – Direct Drive Axial Fan					
<b>No. of fan</b>		1	1	1	2	2	2
<b>Fan speed</b>	rpm	960	960	960	960	960	960
<b>WATER PUMP</b>							
<b>Input Power</b>	kW	0.75	0.75	0.75	1.85	1.85	1.85
<b>Working Pressure</b>	mAq	29.5	28.9	26.0	33.5	33.0	32.0
<b>WATER TANK</b>							
<b>Material</b>		PE Insulated FRP Tank					
<b>Volume</b>	L	20	27.5	27.5	70	70	70
<b>CONTROL</b>							
<b>Control System</b>		Microprocessor auto control PC board c/w fault message display.					
<b>Safety Protection</b>		High-low pressure protection, motor overload protection, anti-freeze protection, water flow protection, phase-sequence protection, compressor overload protection and water level sensor.					
<b>PIPING CONNECTIONS</b>							
<b>Inlet/Outlet</b>	mm	25/25	25/25	25/25	32/32	32/32	32/32
<b>Make-up Water</b>	mm	15	15	15	15	15	15
<b>Drain/Overflow</b>	mm	15/15	15/15	15/15	15/15	15/15	15/15
<b>DIMENSION</b>							
<b>Length</b>	mm	710	810	810	1,520	1,520	1,520
<b>Width</b>	mm	710	810	810	810	810	810
<b>Height</b>	mm	850	1,065	1,065	1,065	1,065	1,065
<b>ESTIMATED UNIT WEIGHT</b>							
<b>Shipping Weight</b>	kg	130	170	210	270	280	300
<b>Operating Weight</b>	kg	150	200	240	350	360	380

Note:

Nominal values are based on 12°C/7°C chilled water inlet/outlet temperatures and 35°C ambient temperature.

Product specifications may change from time to time as product improvements and developments are released. Please confirm with us for latest update on the product interested.

**AMC-AC-B-2 SERIES**

Model	AMC	100	160	200	250	300
<b>NOMINAL COOLING CAPACITY</b>	hp	10	16	20	25	30
	Btu/hr	95,600	157,200	206,000	236,000	300,000
	kcal/hr	24,090	39,610	51,910	59,470	75,600
	kW	28.0	46.1	60.4	69.2	87.9
<b>Refrigerant</b>		R407C				
<b>No. of Refrigerant Circuit</b>		2	2	2	2	2
<b>COMPRESSOR</b>						
<b>Type</b>		Hermetic Scroll Compressor				
<b>Quantity</b>		2	2	2	2	2
<b>Power Source</b>	V/Ph/Hz	380-415V, 3Ph, 50Hz				
<b>Power</b>	kW	4.46	6.95	8.95	10.15	13.65
<b>Running Ampere</b>	A	8.4	12.9	16.0	17.6	26.5
<b>EVAPORATOR</b>						
<b>Type</b>		SUS Brazed Plate Heat Exchanger				
<b>Nominal Water Flow Rate</b>	L/min	84	134.4	168	210	252
	m <sup>3</sup> /hr	5.0	8.1	10.1	12.6	15.1
<b>CONDENSER</b>						
<b>Type</b>		Aluminium Fin – Copper Tube				
<b>Heat Transfer Area</b>	m <sup>2</sup>	90	132	175	198	280
<b>CONDENSER FAN</b>						
<b>Type</b>		Weather Proof – Direct Drive Axial Fan				
<b>No. of fan</b>		2	2	2	2	3
<b>Fan speed</b>	rpm	960	960	960	960	960
<b>WATER PUMP</b>						
<b>Input Power</b>	kW	1.85	1.85	1.85	2.2	2.2
<b>Working Pressure</b>	mAq	33.5	31.5	28.0	31.0	27.5
<b>WATER TANK</b>						
<b>Material</b>		PE Insulated FRP Tank				
<b>Volume</b>	L	70	70	80	80	80
<b>CONTROL</b>						
<b>Control System</b>		Microprocessor auto control PC board c/w fault message display.				
<b>Safety Protection</b>		High-low pressure protection, motor overload protection, anti-freeze protection, water flow protection, phase-sequence protection, compressor overload protection and water level sensor.				
<b>PIPING CONNECTIONS</b>						
<b>Inlet/Outlet</b>	mm	32/32	32/32	50/50	50/50	50/50
<b>Make-up Water</b>	mm	15	15	15	15	15
<b>Drain/Overflow</b>	mm	15/15	15/15	25/25	25/25	25/25
<b>DIMENSION</b>						
<b>Length</b>	mm	1,520	1,520	1,750	1,950	2,250
<b>Width</b>	mm	810	810	1,060	1,060	1,100
<b>Height</b>	mm	1,065	1,065	1,750	1,800	1,850
<b>ESTIMATED UNIT WEIGHT</b>						
<b>Shipping Weight</b>	kg	290	350	570	620	790
<b>Operating Weight</b>	kg	370	430	660	710	880

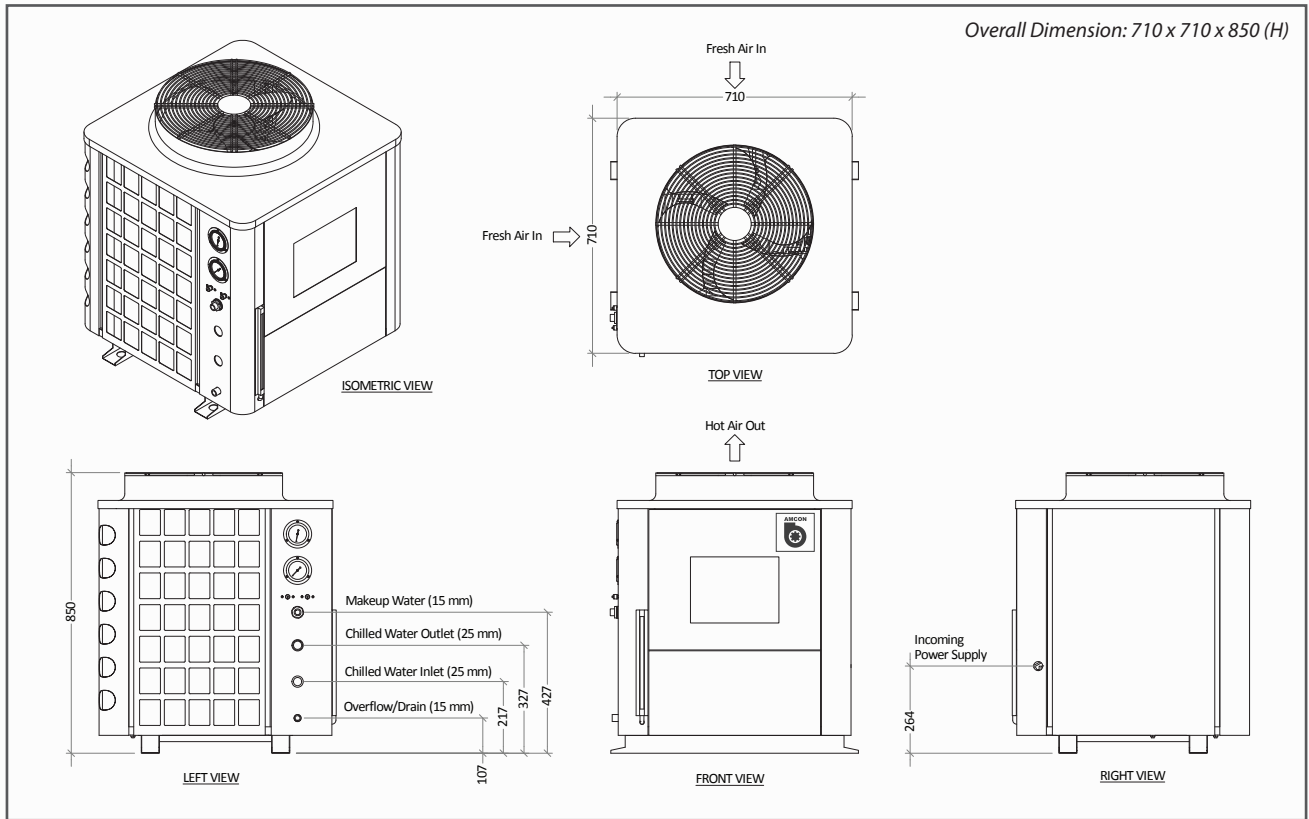
Note:

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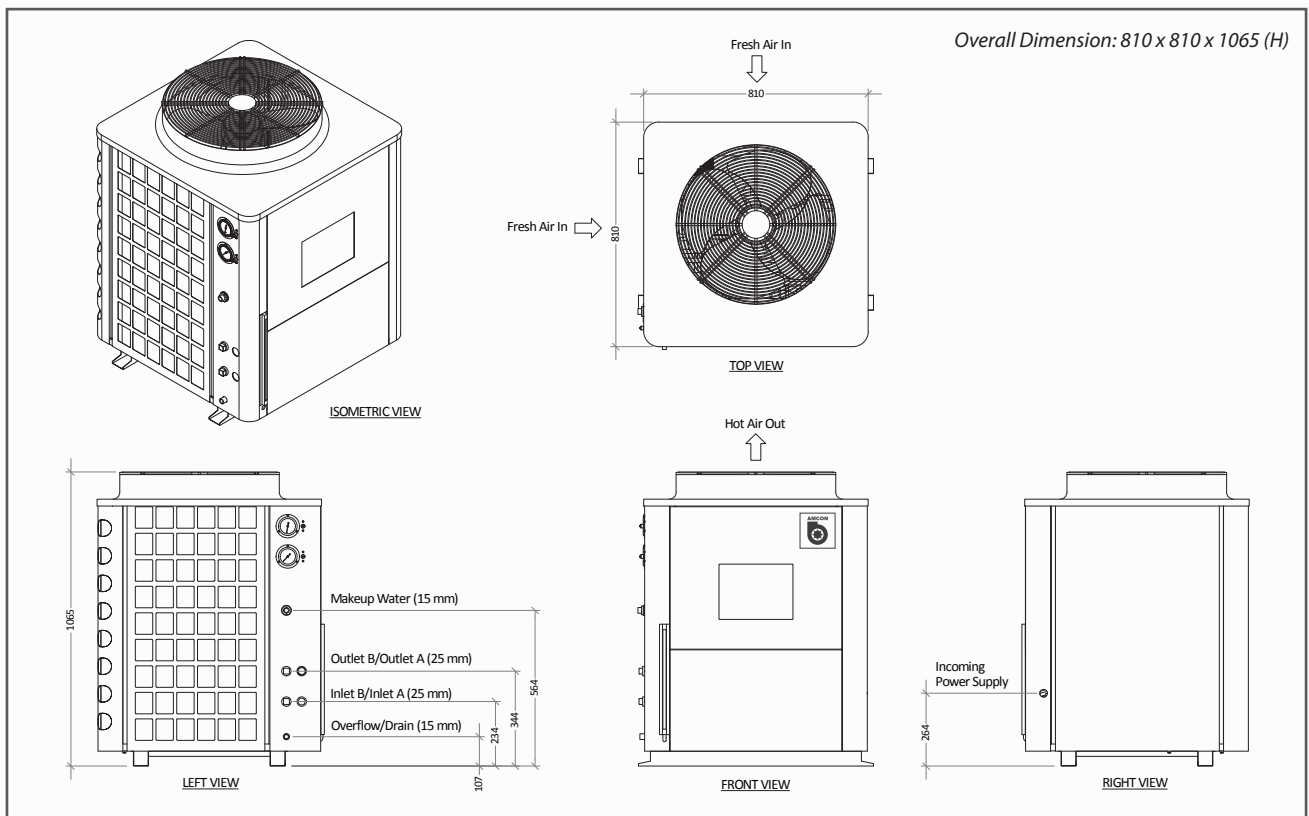
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# DIMENSIONS

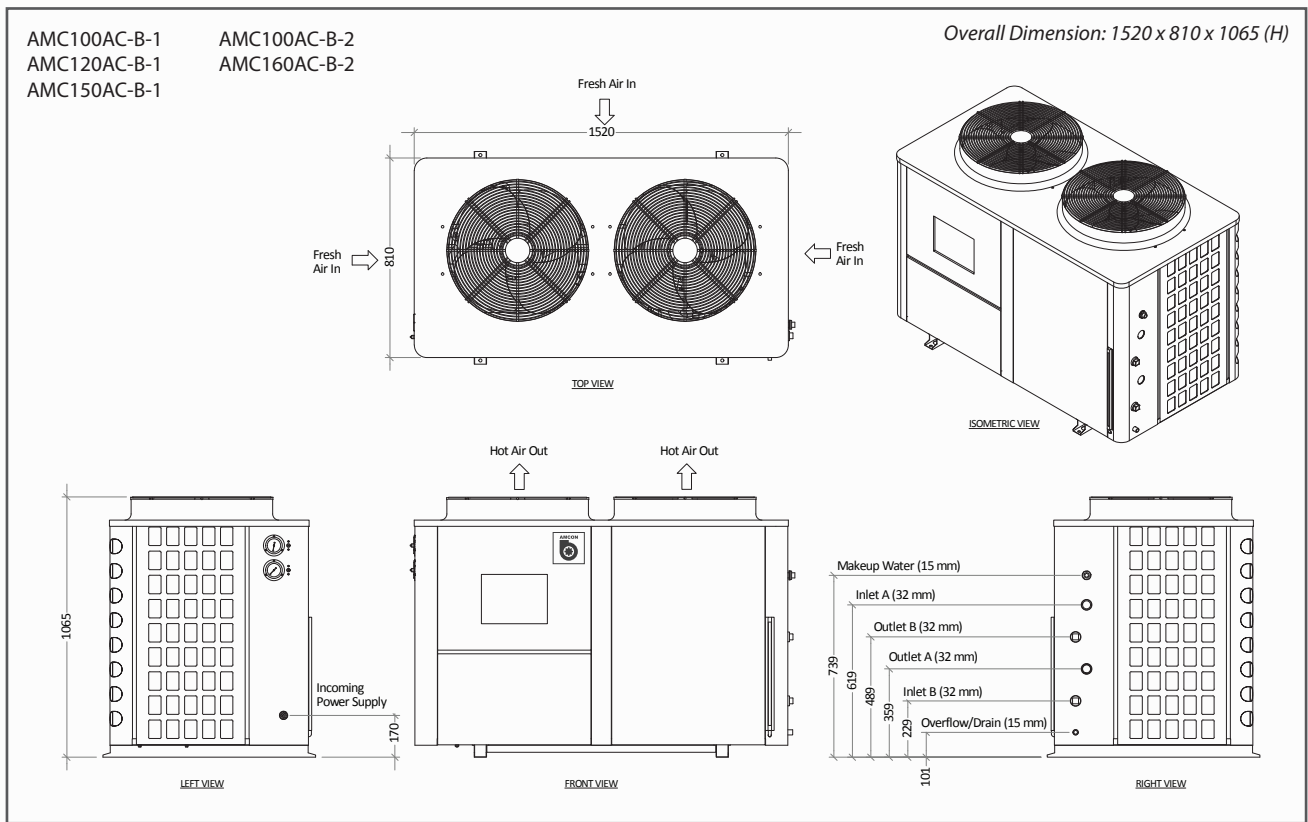
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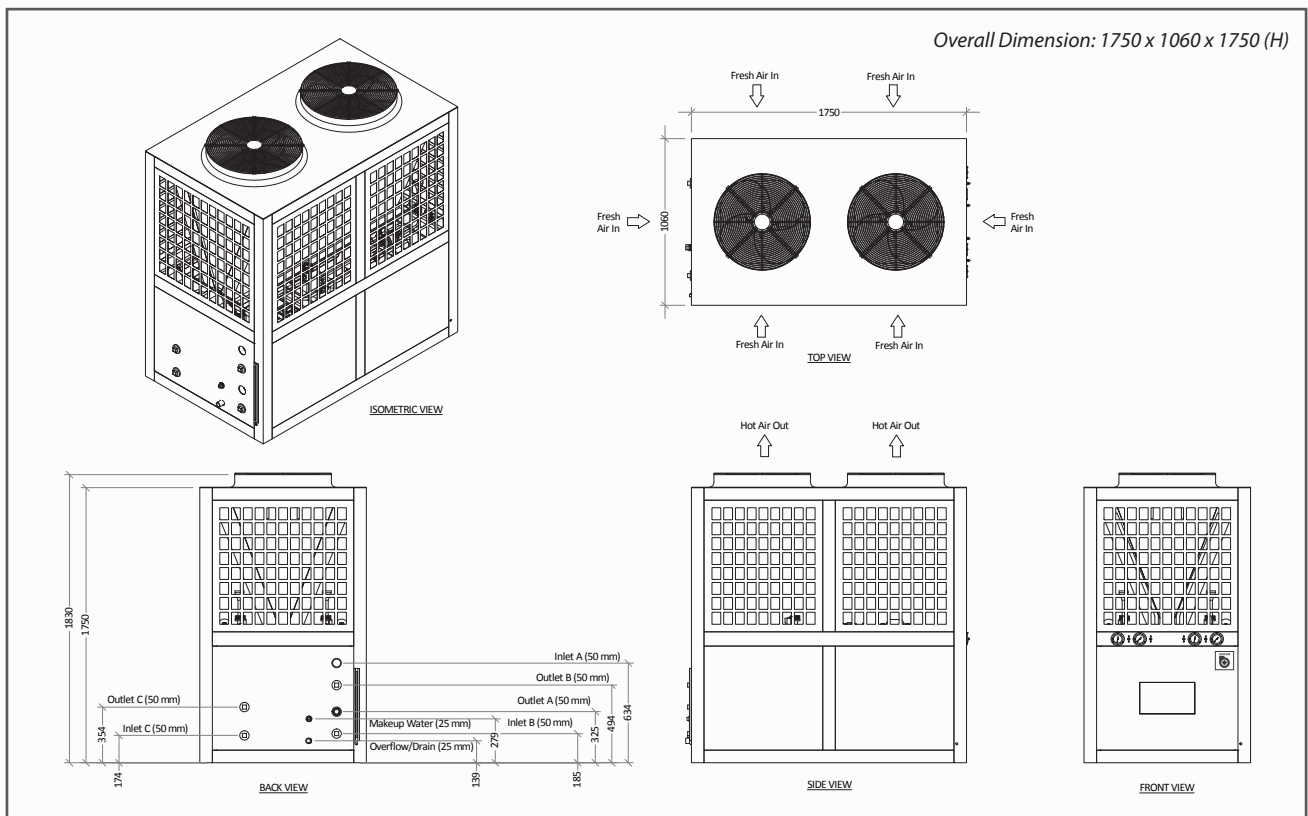
## AMC050/080AC-B-1



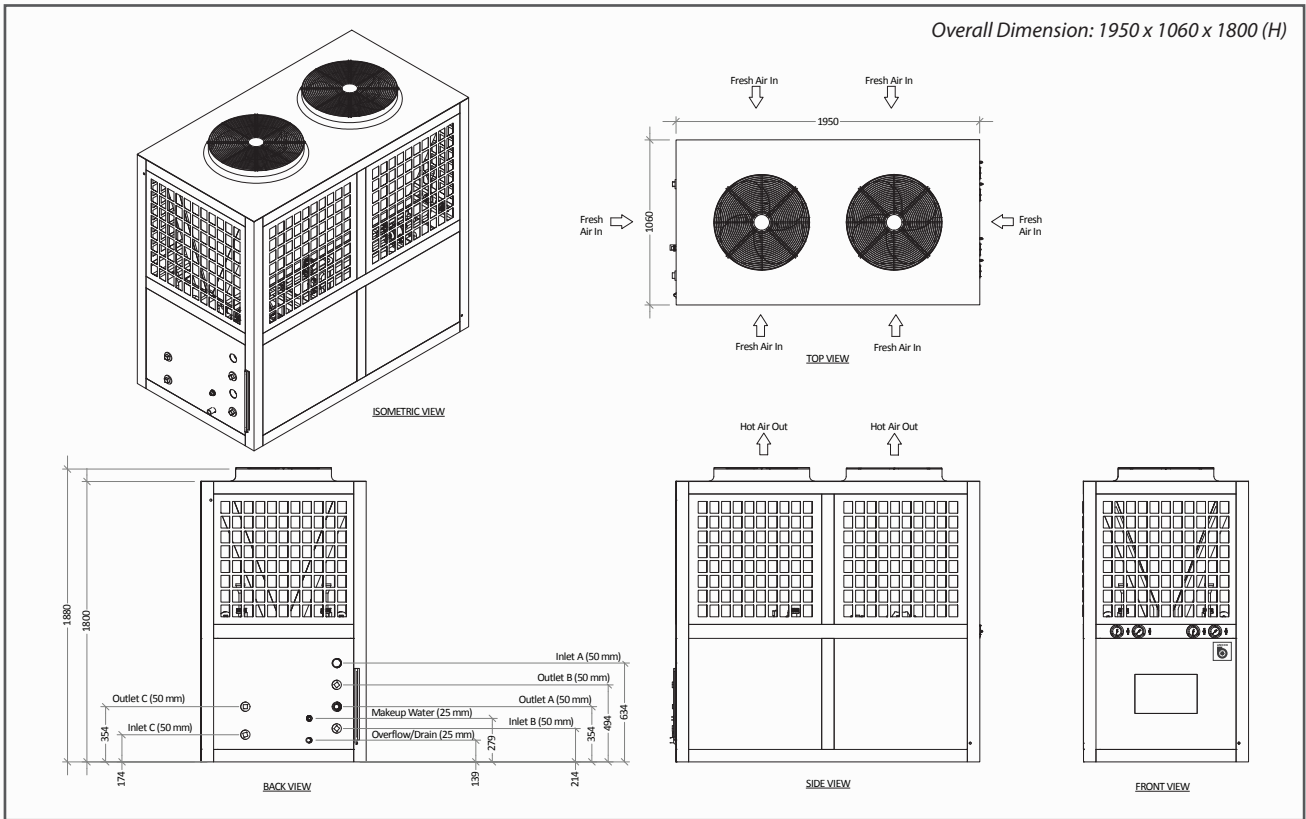
AMC100AC-B-1 ~ AMC160AC-B-2



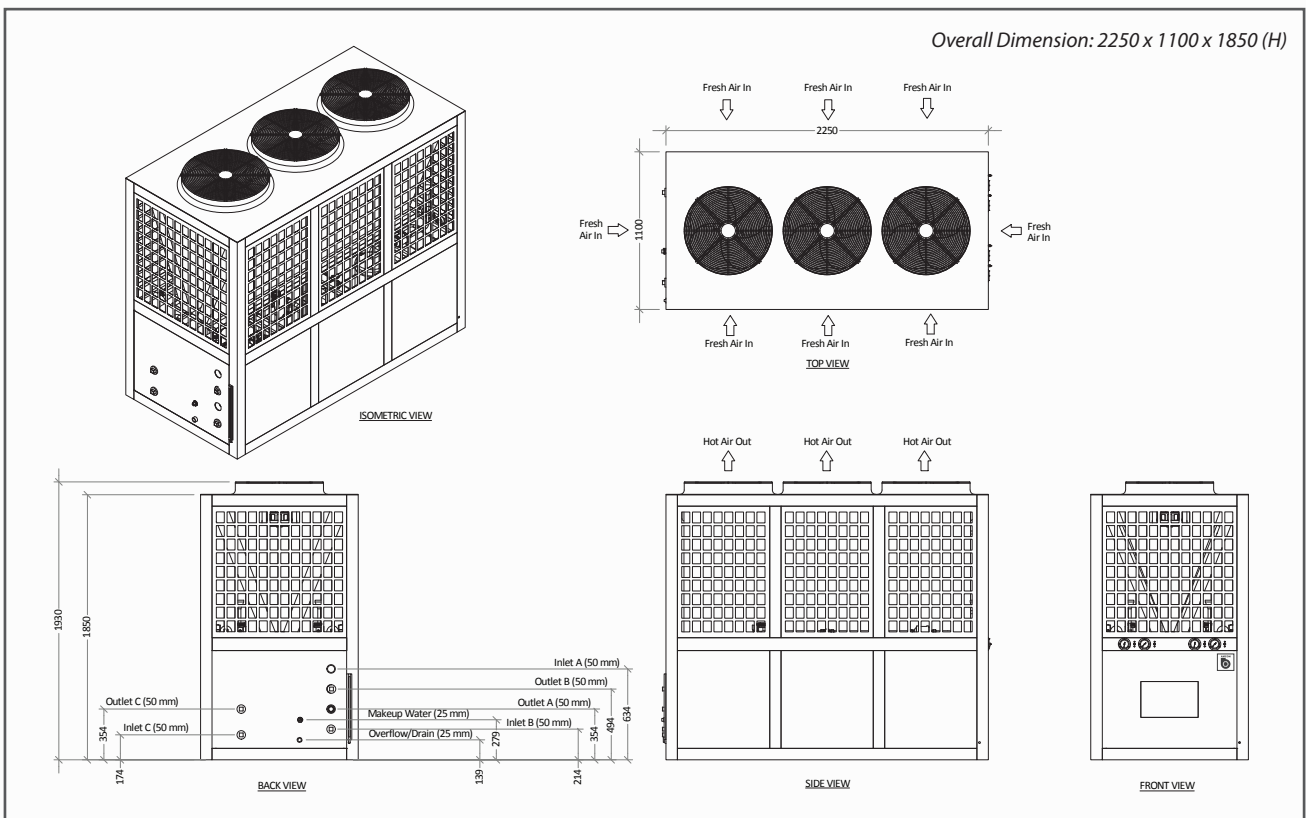
AMC200AC-B-2



## AMC250AC-B-2



## AMC300AC-B-2



AMSS-AC-CTL-2020-01

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