

Water Cooled Packaged Unit

Models: MWCP35AE~MWCP205AE
Capacity: 32kW-199kW
Refrigerant: R407C



For More Than a Century, McQuay has been Devoted to

Different Buildings



Global headquarters of McQuay (Minneapolis, USA)



McQuay Staunton Factory, USA



McQuay Auburn Factory, USA



McQuay Cecchina Factory, Italy



McQuay Shenzhen Factory, China



Workshop of McQuay Shenzhen Factory, China

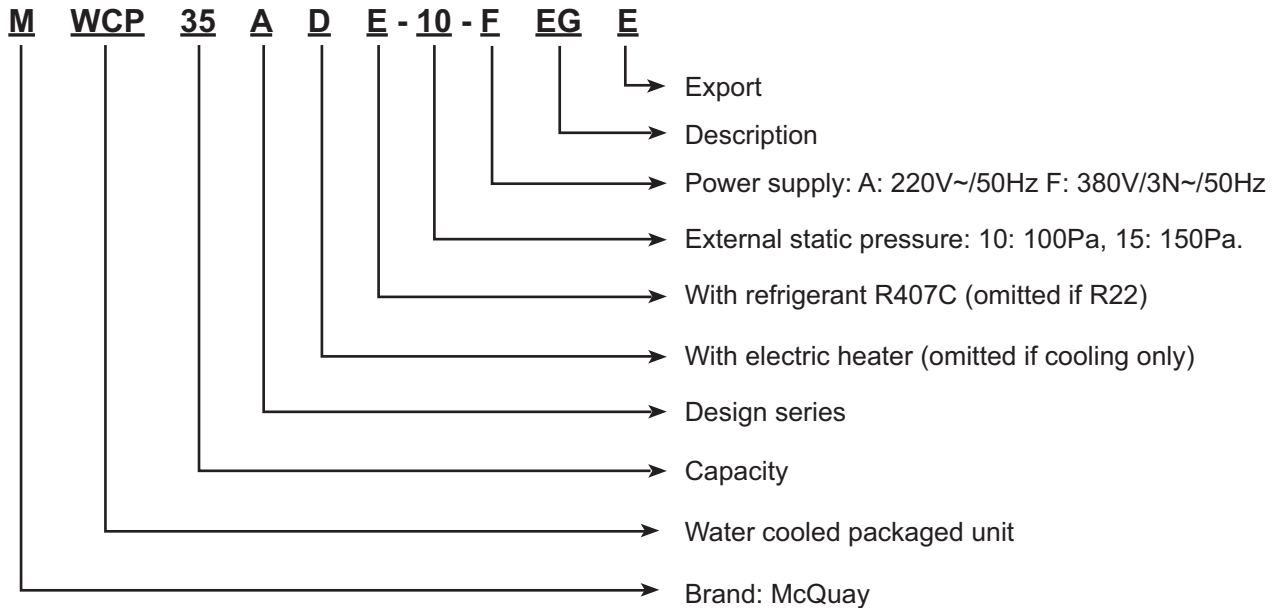


Test center of McQuay Shenzhen Factory, China



Sound test room of McQuay Shenzhen Factory, China

Nomenclature



Features

The McQuay “SCROLL” MWCP water-cooled packaged units are designed for duct type air-conditioning system in commercial and industrial application. The MWCP water-cooled packaged unit has single or multiple hermetic compressors with independent refrigerant circuits. Each refrigerant circuit consists of a high efficiency condenser, a sealed strainer and capillary tubes. Every McQuay MWCP unit has been leak tested, evacuated and fully charged with refrigerant R407C at the factory.

High Efficiency Hermetic Compliant Scroll Compressor

- Quiet operation.
- Excellent reliability with 70% fewer moving parts than comparably sized reciprocating compressors.
- Greater capability at handling liquid and debris in the system.
- High efficiency performance.

Enhanced Copper Tubes Condenser

Extra-high efficiency is attained by special designed shell-and-tube condenser with “T” groove copper tube surfaces for superior refrigerant-water heat transfer.

Anti-Corrosion Unit Casing

Unit casing is constructed of electro-galvanized steel sheet. Casing surface is finished with epoxy polyester powder coating. Therefore, units are suitable for both commercial and industrial application.

Whisper- Quiet Operation

Each unit is divided into separate compartments such that compressor noise is kept away from the supply air stream.

Internal insulation of 1/2 inch thick fiberglass and double blowers design further reduce noise level.

Quality Assurance

Each unit is leak-tested, evacuated, fully charged with refrigerant and run tested in McQuay’s ISO9001 certified factory.

Specifications

General Data

MODEL		MWCP35AE	MWCP55AE	MWCP70AE	MWCP75AE	
NOMINAL CAPACITY	W	32000	46500	64000	73500	
NOMINAL TOTAL INPUT POWER	kW	7.8	13.1	16.2	18.1	
ELECTRICAL HEATER	W	12000	21000	27000	36000	
POWER SOURCE	V/Ph/Hz	380-415/3/50				
REFRIGERANT TYPE		R407C				
AIR FLOW	m ³ /h	5900	8100	10800	13600	
EXTERNAL STATIC PRESSURE	Pa	100	150	150	200	
SOUND PRESSURE LEVEL	dB(A)	65	67	70	72	
UNIT DIMENSION	LENGTH	mm	1278	1722	1922	2000
	WIDTH	mm	677	736	836	1060
	HEIGHT	mm	1902	1921	2035	1989
PACKING DIMENSION	LENGTH	mm	1320	1790	1990	2040
	WIDTH	mm	720	780	895	1110
	HEIGHT	mm	2090	2100	2230	2150
UNIT WEIGHT	kg/lb	280	455	610	720	
CONDENSATE DRAIN SIZE	mm/in	25.4/1	25.4/1	25.4/1	25.4/1	
WATER PIPE CONNECTION	TYPE	Female Thread				
	SIZE	mm/in	31.75/1.25	50.80/2.00	50.80/2.00	50.80/2.00

NOTES:

1. ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2. NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW: COOLING 27°CDB/19°CWB INDOOR AND 30°C/35°C ENTERING/LEAVING WATER TEMPERATURE.
3. SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

MODEL		MWCP85AE	MWCP100AE	MWCP115AE	MWCP125AE	
NOMINAL CAPACITY	W	82000	95000	110000	118000	
NOMINAL TOTAL INPUT POWER	kW	20	25.4	29.2	30	
ELECTRICAL HEATER	W	36000	42000	48000	48000	
POWER SOURCE	V/Ph/Hz	380-415/3/50				
REFRIGERANT TYPE		R407C				
AIR FLOW	m ³ /h	14500	17000	19800	22000	
EXTERNAL STATIC PRESSURE	Pa	200	250	250	250	
SOUND PRESSURE LEVEL	dB(A)	72	74	75	75	
UNIT DIMENSION	LENGTH	mm	2000	2000	2220	2220
	WIDTH	mm	1060	1060	1243	1243
	HEIGHT	mm	1989	1989	2068	2068
PACKING DIMENSION	LENGTH	mm	2040	2040	2250	2250
	WIDTH	mm	1110	1110	1290	1290
	HEIGHT	mm	2150	2150	2240	2240
UNIT WEIGHT	kg/lb	800	930	1010	1030	
CONDENSATE DRAIN SIZE	mm/in	25.4/1	25.4/1	25.4/1	25.4/1	
WATER PIPE CONNECTION	TYPE	Female Thread				
	SIZE	mm/in	50.80/2.00	63.50/2.50	63.50/2.50	63.50/2.50

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3. SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

General Data

MODEL			MWCP135AE	MWCP145AE	MWCP165AE	MWCP185AE	MWCP205AE
NOMINAL CAPACITY		W	127000	144000	154000	180000	199000
NOMINAL TOTAL INPUT POWER		kW	33	34.4	39	42	49.4
ELECTRICAL HEATER		W	48000	60000	60000	55000	55000
POWER SOURCE		V/Ph/Hz	380-415/3/50				
REFRIGERANT TYPE			R407C				
AIR FLOW		m ³ /h	22000	24600	26400	28800	33000
EXTERNAL STATIC PRESSURE		Pa	300	300	350	350	350
SOUND PRESSURE LEVEL		dB(A)	76	77	77	78	79
UNIT DIMENSION	LENGTH	mm	2420	2420	2420	2675	3002
	WIDTH	mm	1243	1243	1243	1243	1534
	HEIGHT	mm	2068	2068	2068	2068	2083
PACKING DIMENSION	LENGTH	mm	2450	2450	2450	2700	3085
	WIDTH	mm	1290	1290	1290	1290	1700
	HEIGHT	mm	2240	2240	2240	2240	2330
UNIT WEIGHT		kg/lb	1225	1235	1250	1350	1400
CONDENSATE DRAIN SIZE		mm/in	25.4/1	25.4/1	25.4/1	25.4/1	25.4/1
WATER PIPE CONNECTION	TYPE		Female Thread				
	SIZE	mm/in	63.50/2.50	63.50/2.50	76.20/3.00	76.20/3.00	76.20/3.00

NOTES:

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3. SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

Components Data

MODEL		MWCP35AE	MWCP55AE	MWCP70AE	MWCP75AE			
FAN	TYPE	DOUBLE INLET CENTRIFUGAL						
	QUANTITY	1						
	MATERIAL	Galvanized Steel						
	DRIVE	Belt Drive						
	DIAMETER	mm/in	305/12	381/15	457/18	381/15		
MOTOR	TYPE	Squirrel Cage Induction						
	QUANTITY	1						
	INDEX OF PROTECTION (IP)	IP54						
COMPRESSOR	TYPE	Scroll						
	OIL TYPE	Mineral oil						
EVAPORATOR COIL	TUBE	MATERIAL	Copper					
		DIAMETER	mm/in	9.52/0.375				
		THICKNESS	mm/in	0.35/0.014				
	FIN	MATERIAL	Aluminum					
		THICKNESS	mm/in	0.11/0.004				
		FACE AREA	m ² /ft ²	0.78/0.03	1.05/12.64	1.35/14.58	2.05/22.14	
		ROW		3				
		FIN PER INCH		12				
CONDENSER	TYPE	TUBE IN TUBE		SHELL AND TUBE				
	WATER FLOW	m ³ /h	6.3	9.7	12	14.4		
	PRESSURE DROP	kPa	76	65	35	17.2		
	WATER PIPE SIZE	in	R1-1/4"	R2"				
AIR QUALITY	FILTER	TYPE	Nylon					
		QUANTITY	pc	1				
		SIZE	LENGTH	mm/in	1025/40.35	1466/57.72	1656/65.20	529/20.83
			WIDTH	mm/in	775/30.51	725/28.54	825/32.48	660/25.98
			THICKNESS	mm/in	8/0.315			
CASING	MATERIAL	Electro-galvanized Steel						
	COLOUR	Light Grey (RALF032)						

NOTE:
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MODEL		MWCP85AE	MWCP100AE	MWCP115AE	MWCP125AE			
FAN	TYPE	DOUBLE INLET CENTRIFUGAL						
	QUANTITY	1						
	MATERIAL	Galvanized Steel						
	DRIVE	Belt Drive						
	DIAMETER	mm/in	381/15	381/15	381/15	381/15		
MOTOR	TYPE	Squirrel Cage Induction						
	QUANTITY	1						
	INDEX OF PROTECTION (IP)	IP54						
COMPRESSOR	TYPE	Scroll						
	OIL TYPE	Mineral oil						
EVAPORATOR COIL	TUBE	MATERIAL	Copper					
		DIAMETER	mm/in	9.52/0.375				
		THICKNESS	mm/in	0.35/0.014				
	FIN	MATERIAL	Aluminum					
		THICKNESS	mm/in	0.11/0.004				
		FACE AREA	m ² /ft ²	2.05/22.14	2.05/22.14	2.39/25.49	2.39/25.49	
		ROW		3				
		FIN PER INCH		12				
CONDENSER	TYPE	SHELL AND TUBE						
	WATER FLOW	m ³ /h	14.8	19.3	23.4	23.7		
	PRESSURE DROP	kPa	22.5	16.6	25	22.3		
	WATER PIPE SIZE	in	R2"	R2-1/2"				
AIR QUALITY	FILTER	TYPE	Nylon					
		QUANTITY	pc	6				
		SIZE	LENGTH	mm/in	529/20.83	529/20.83	595/23.35	595/23.35
			WIDTH	mm/in	660/25.98	660/25.98	686/27.00	686/27.00
			THICKNESS	mm/in	8/0.315			
CASING	MATERIAL	Electro-galvanized Steel						
	COLOUR	Light Grey (RALF032)						

NOTE:
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Components Data

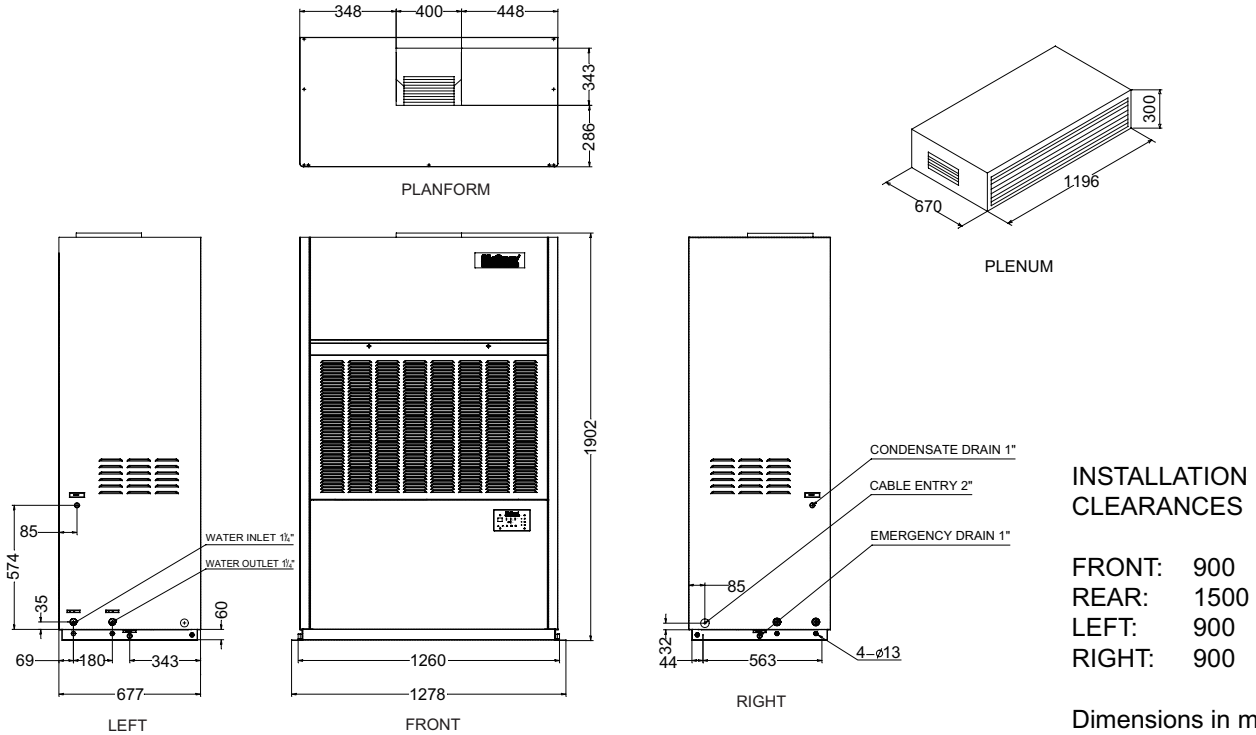
MODEL			MWCP135AE	MWCP145AE	MWCP165AE	MWCP185AE	MWCP205AE		
FAN	TYPE		DOUBLE INLET CENTRIFUGAL						
	QUANTITY		1			2			
	MATERIAL		Galvanized Steel						
	DRIVE		Belt Drive						
	DIAMETER	mm/in	381/15	457/18	457/18	457/18	457/18		
MOTOR	TYPE		Squirrel Cage Induction						
	QUANTITY		1			2			
	INDEX OF PROTECTION (IP)		IP54						
COMPRESSOR	TYPE		Scroll						
	OIL TYPE		Mineral oil						
EVAPORATOR COIL	TUBE	MATERIAL		Copper					
		DIAMETER	mm/in	9.52/0.375					
		THICKNESS	mm/in	0.35/0.014					
	FIN	MATERIAL		Aluminum					
		THICKNESS	mm/in	0.11/0.004					
		FACE AREA	m ² /ft ²	2.66/28.40	2.66/28.40	2.66/28.40	3.00/28.40	3.56/37.45	
		ROW		3					
		FIN PER INCH		12					
CONDENSER	TYPE		SHELL AND TUBE						
	WATER FLOW	m ³ /h	27.3	28.5	29.5	36.6	48.1		
	PRESSURE DROP	kPa	29.6	29.8	38.9	37.6	78.5		
	WATER PIPE SIZE	in	R2-1/2"			R3"			
AIR QUALITY	FILTER	TYPE		Nylon					
		QUANTITY		6					
		SIZE	LENGTH	mm/in	661/26	661/26	661/26	686/27	629/25
			WIDTH	mm/in	686/27	686/27	686/27	744/29	673/26
			THICKNESS	mm/in	8/0.315				
CASING	MATERIAL		Electro-galvanized Steel						
	COLOUR		Light Grey (RALF032)						

NOTE:

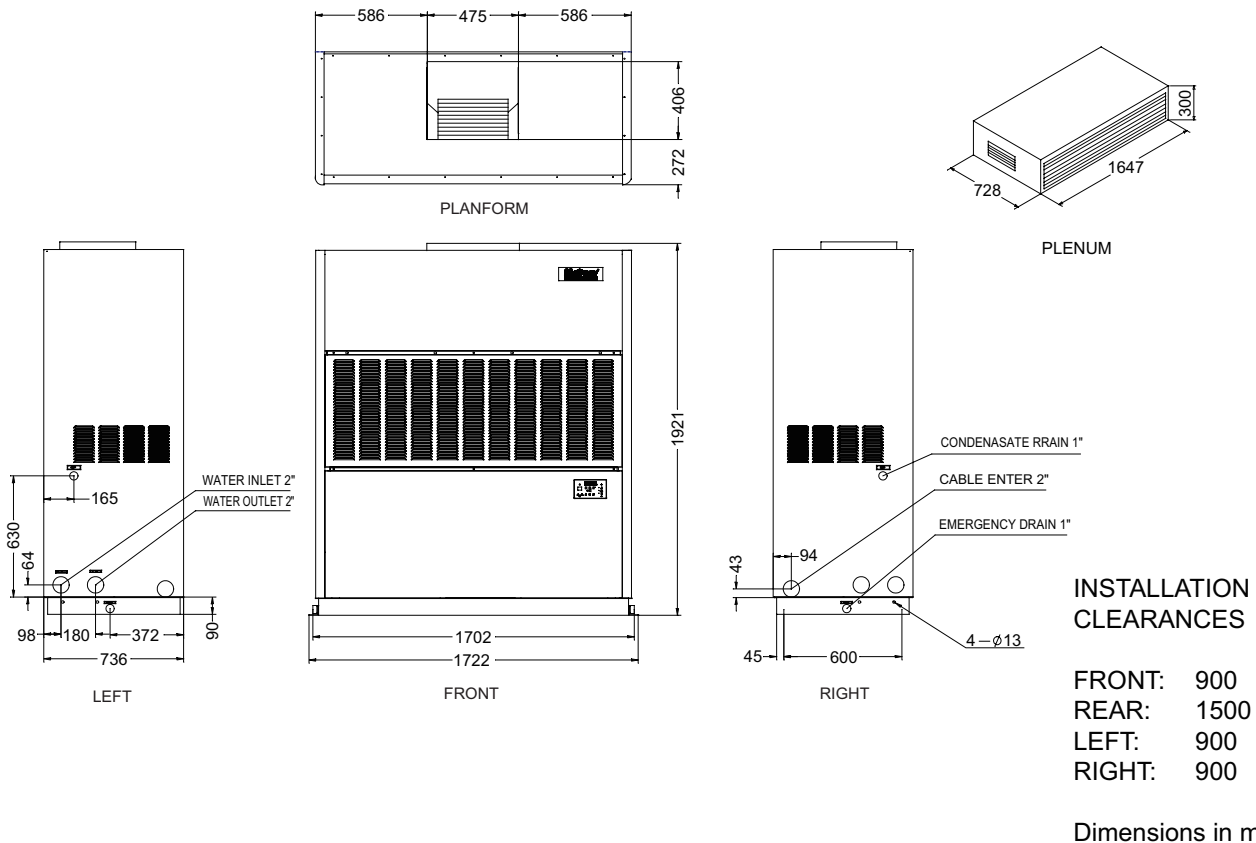
ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Dimensional Data

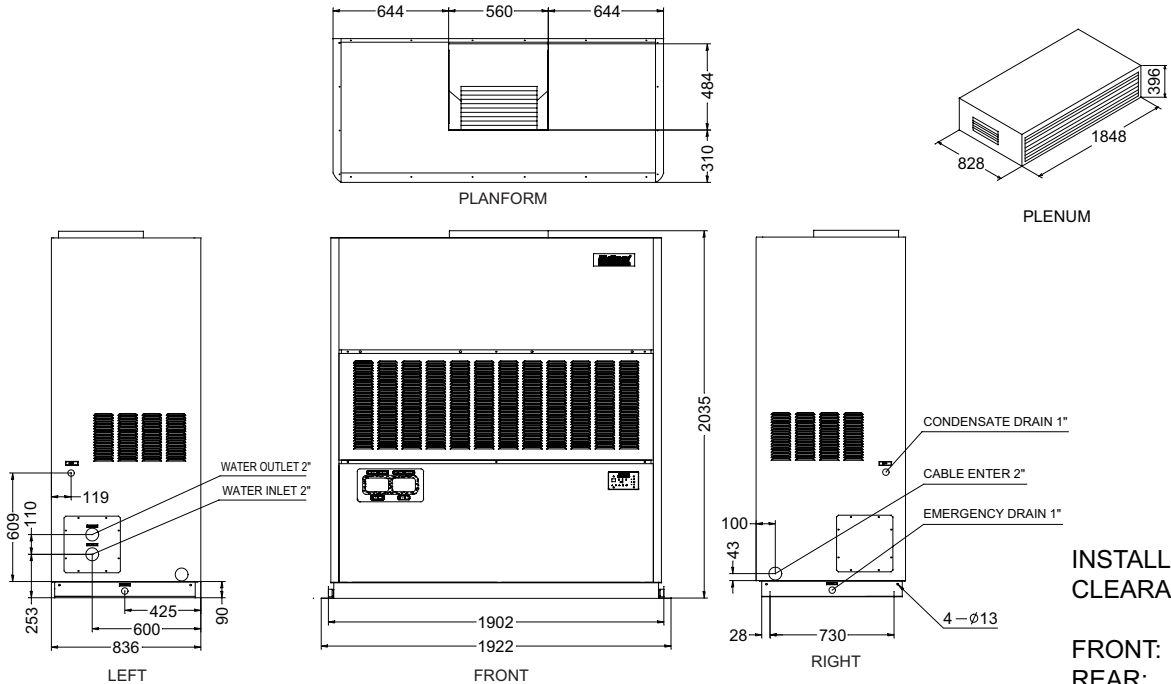
MODEL: MWCP35AE



MODEL: MWCP55AE



MODEL: MWCP70AE

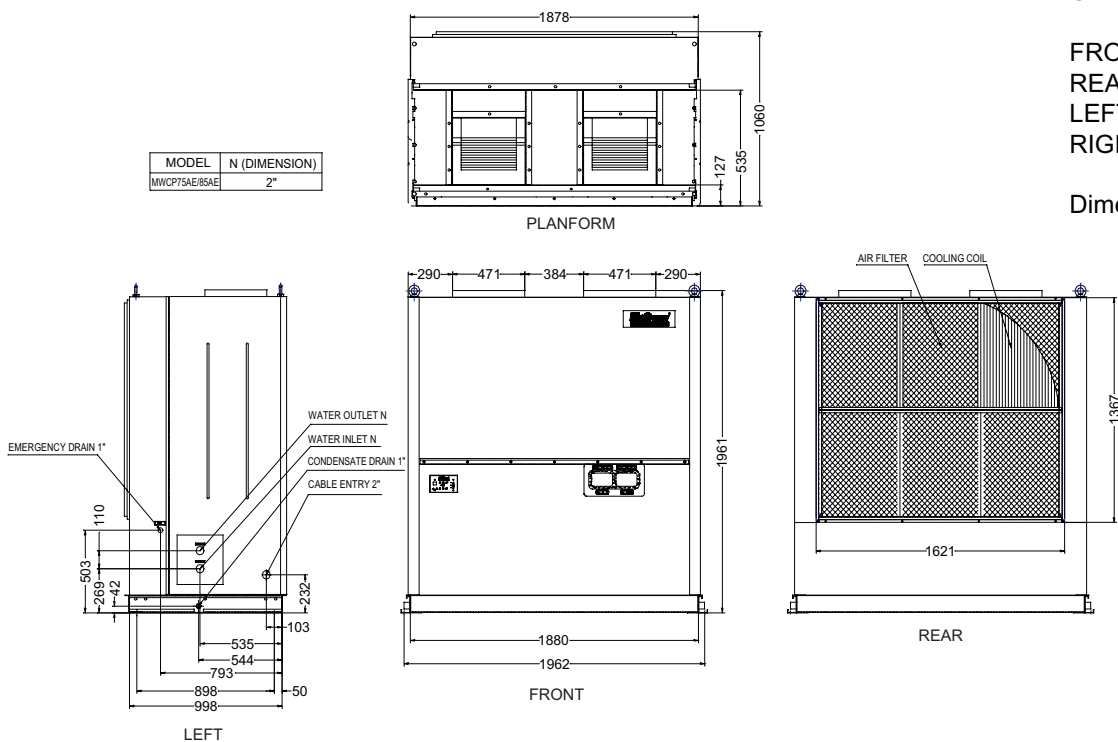


INSTALLATION CLEARANCES

- FRONT: 900
- REAR: 1500
- LEFT: 900
- RIGHT: 900

Dimensions in mm

MODEL: MWCP75AE/85AE



MODEL	N (DIMENSION)
MWCP75AE/85AE	2"

INSTALLATION CLEARANCES

- FRONT: 900
- REAR: 1500
- LEFT: 900
- RIGHT: 900

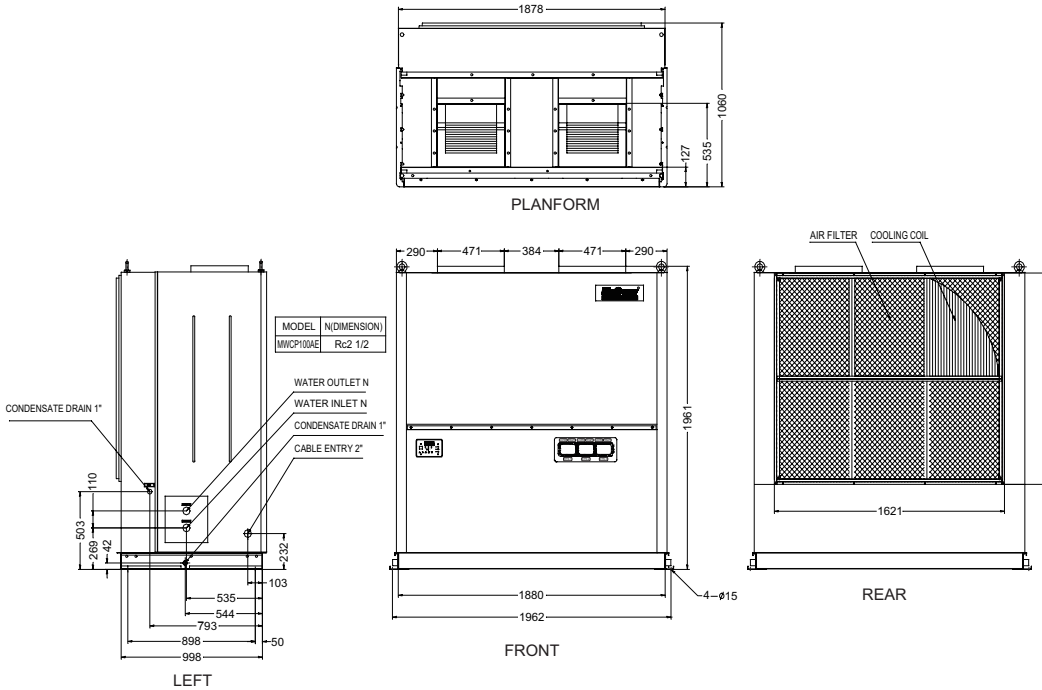
Dimensions in mm

MODEL: MWCP100AE

INSTALLATION CLEARANCES

FRONT: 900
REAR: 1500
LEFT: 900
RIGHT: 900

Dimensions in mm

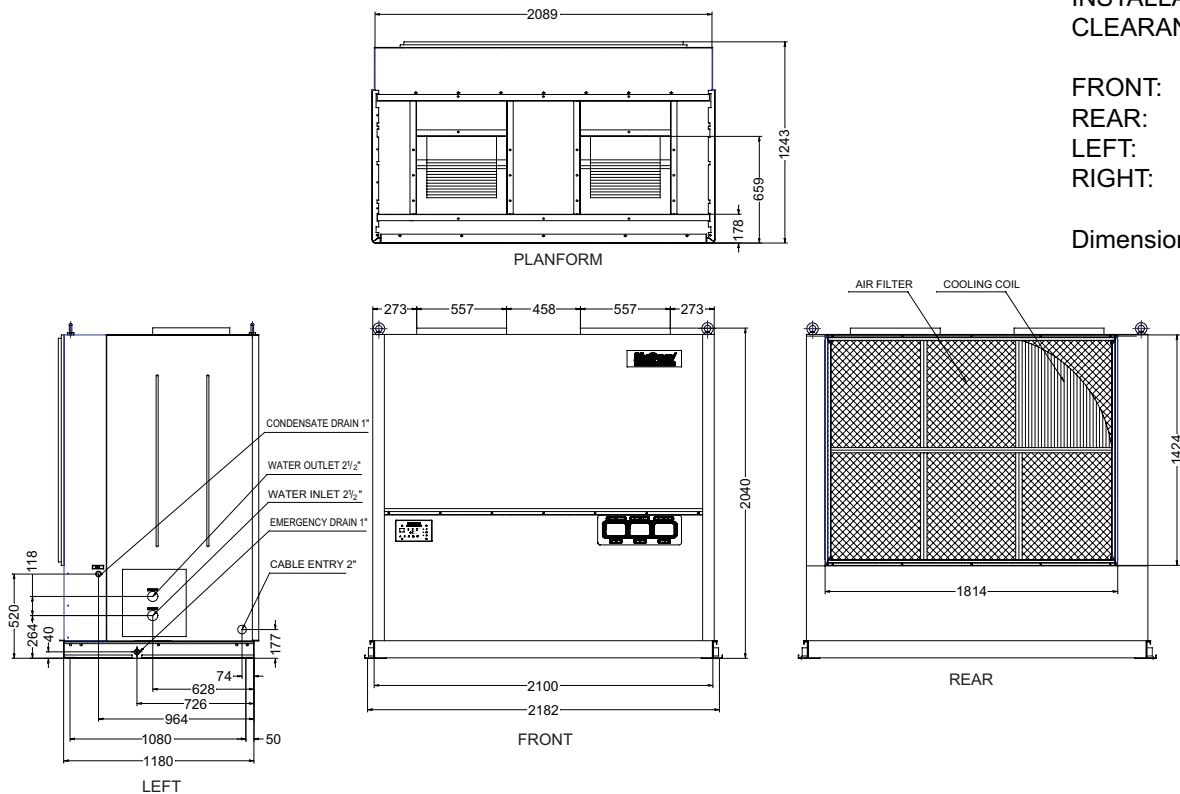


MODEL: MWCP115AE/125AE

INSTALLATION CLEARANCES

FRONT: 900
REAR: 1500
LEFT: 900
RIGHT: 900

Dimensions in mm

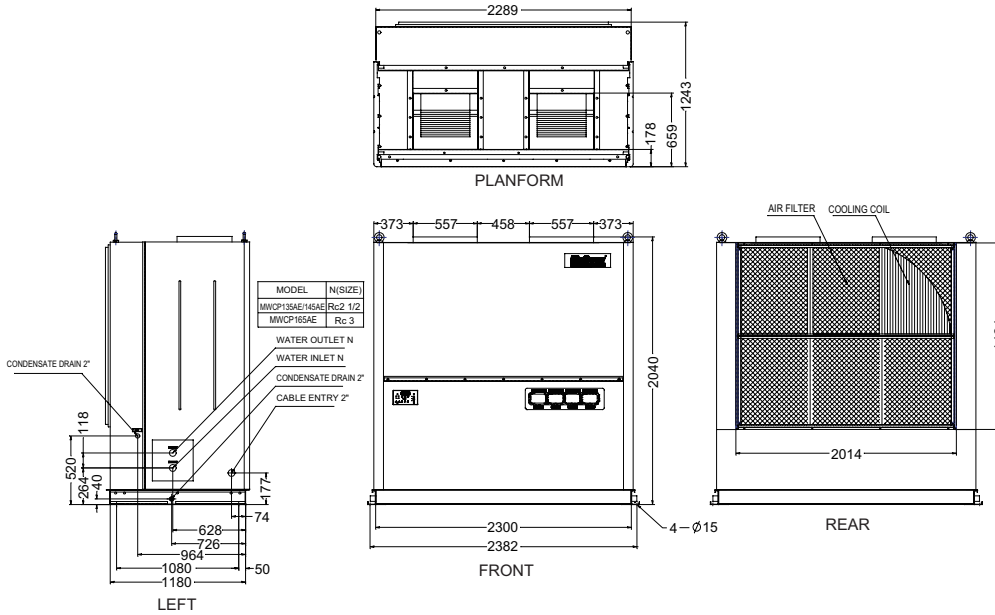


MODEL: MWCP135AE/145A/165AE

INSTALLATION CLEARANCES

FRONT: 900
REAR: 1500
LEFT: 900
RIGHT: 900

Dimensions in mm

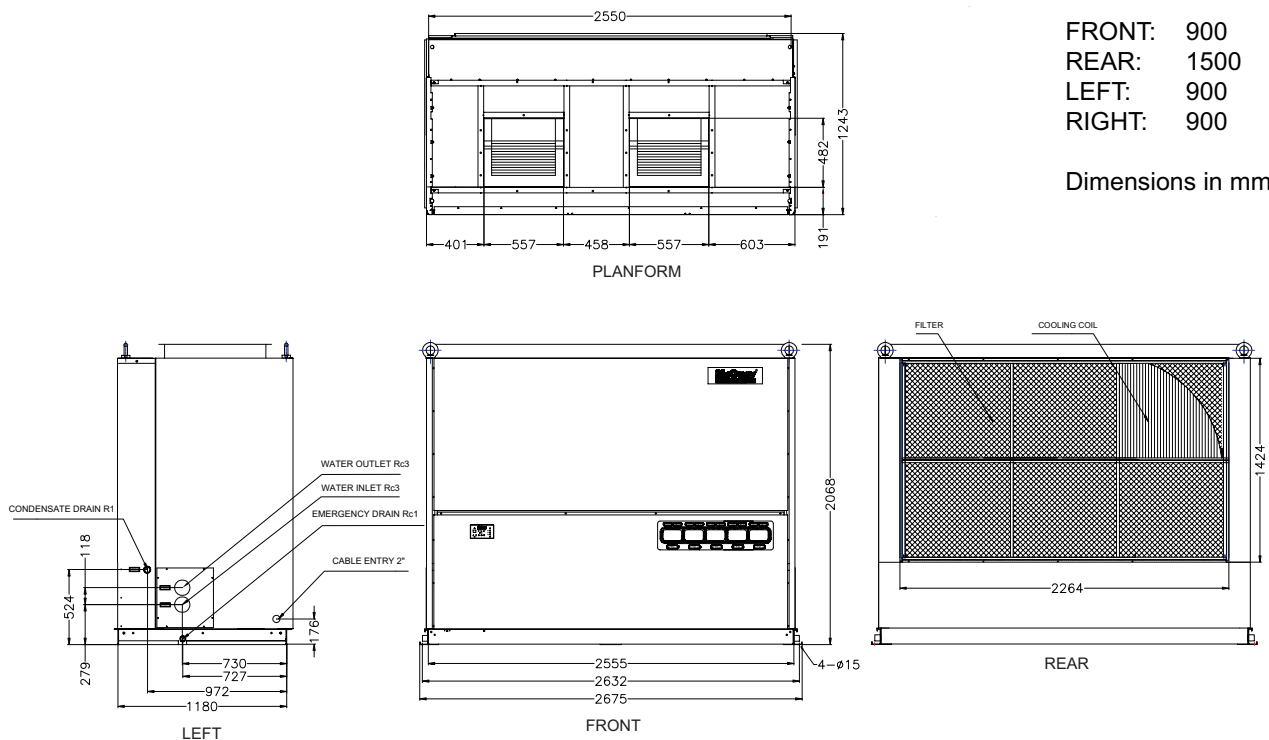


MODEL: MWCP185AE

INSTALLATION CLEARANCES

FRONT: 900
REAR: 1500
LEFT: 900
RIGHT: 900

Dimensions in mm



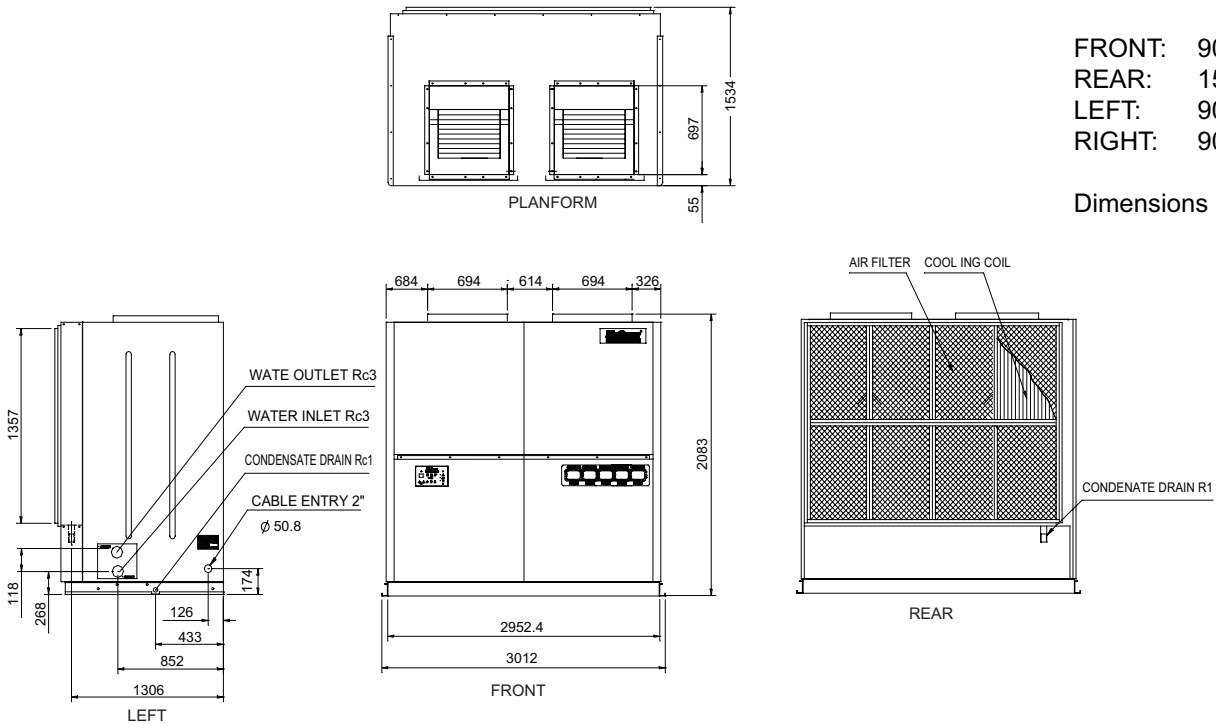


MODEL: MWCP205AE

INSTALLATION CLEARANCES

FRONT: 900
 REAR: 1500
 LEFT: 900
 RIGHT: 900

Dimensions in mm



Installation

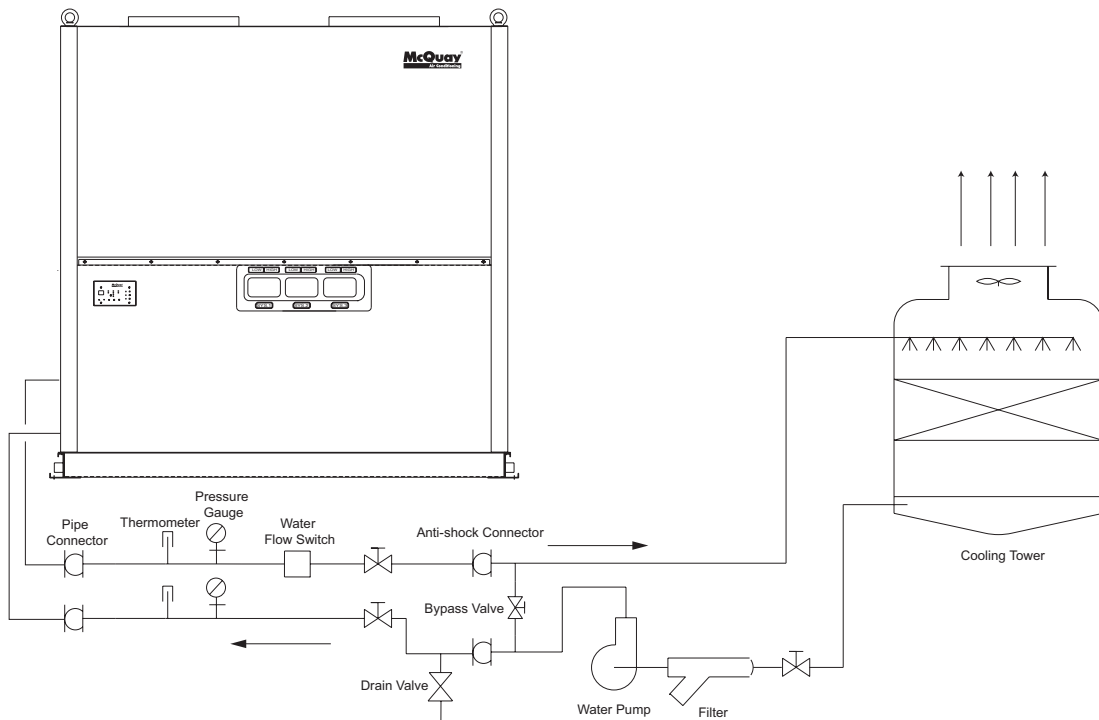
Attention on Installation Location

- Avoid installing the unit in damp and corrosive environment.
- Please install the unit on a level concrete groundwork.
- Space should be ventilated and easy to maintenance. Please refer to the Dimension Illustration for minimum installation.
- A rubber should be placed between the concrete groundwork and the unit to avoid vibration and noise.
- Avoid direct contact between unit/connecting pipe and wall/mounting ceiling.
- Please install the unit in a place that is insensitive to noise, such as stairways, elevator rooms, rest rooms, etc. Muffler can also be installed in the air duct if necessary.

Water Pipe Connection

- All installation for piping must comply with local laws and regulations. Bends and vertical spans should be as less as possible.
- To maintain a constant condensing pressure and temperature, a 3-way valve can be used to accommodate the water flow. The valve has to be mounted to maintain that the water inlet temperature is 16°C at the condenser.
- To prevent water temperature from dropping too low, a temperature switch (27°C recommended) can be used to control the startup/shutdown of fan in the cooling tower.
- The condensate drainpipe is connected to the drain pan of the evaporator (The drain pan is attached to the bottom of the unit for emergency discharge only).

Installation and Connection Layout



Literature No.: CA-MWCP-1101A
Supersedes: CA-MWCP-1001A
Part No.: M08039130017



ISO 9001
Certificate No.: 9601019



BS-OHSAS 18001
Certificate No.: 7644



ISO 14001
Certificate No.: EMS 80362



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While utmost care is taken in ensuring that all details in the publication are correct at the time of going to press, we are constantly striving for improvement and therefore reserve the right to alter model specifications and equipment without notice.

Details of specifications and equipment are also subject to change to suit local conditions and requirements and not all models are available in every market.