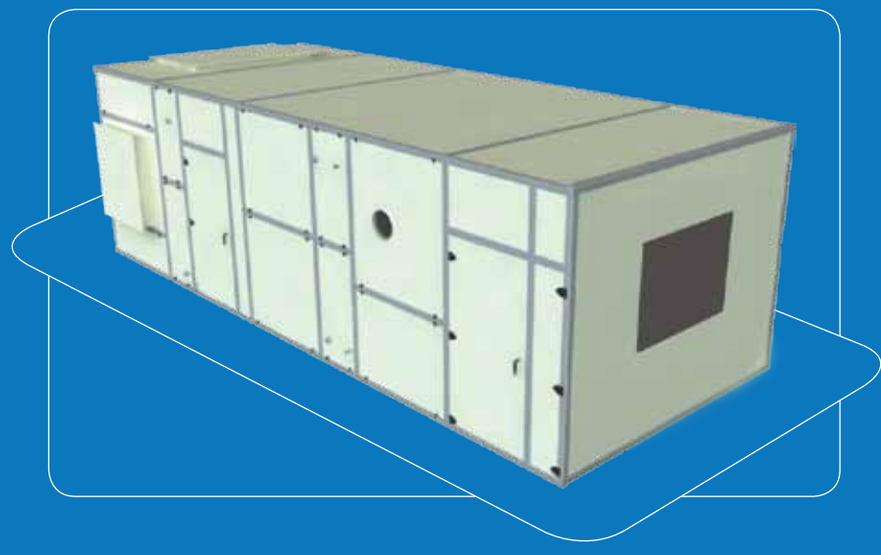
COMMERCIAL REFRIGERATION
AIR CONDITIONING AND HEATING SYSTEMS



ISO 9001 2000

M.K.M.ac Air Handling Units

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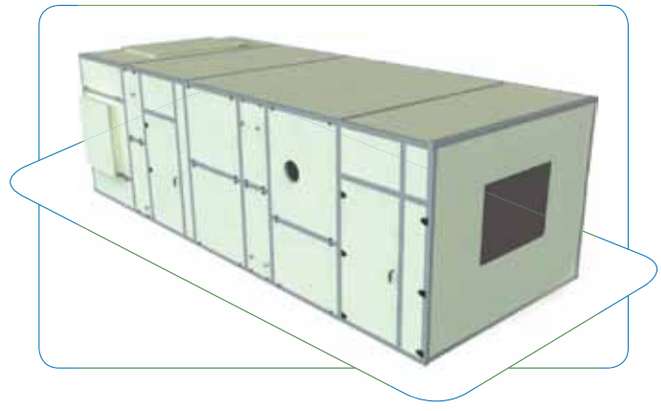


M.K.M.ac Air Handling Units

M.K.M.ac line of Air Handling Units designed Specifically for easy installations and easy maintenance. These air handling units system components meet the same high engineering and performance standards that are characteristic of all M.K.M.ac air conditioning systems.

Unit design capacities in this series range from 6000 to 20000 Cfm. They can perform and deliver their respective cooling duties depending on design requirement, a wide variety of options are made available to meet the precise designer requirements. Our new air handling units are designed for quick and easy installation. They could be equipped with all optional needed controls and accessories leaving to the unit installer the rigging of the units at their respective locations, and power connection.

▸ FEATURES

Housing
Housing construction is modular of galvanized steel or of extruded thermal break aluminum profiles.

Thermal break profiles:
- Have all benefits peculiar to double-walled systems improve the thermal resistance efficiency of the structure, insulating the internal space
- Main access panels are held with special fasteners for easy removal and long life span.

Insulation
Panels are lined with 2" thick insulation (1" option).

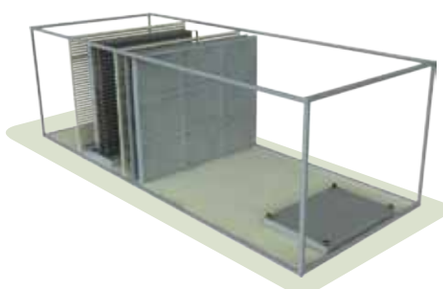
Coils
Constructed of seamless 3/8" or 5/8" copper tubes, corrugated edge aluminum fins (copper fins is option), and galvanized steel or stainless steel frames by demand. Tubes are mechanically expanded into die-formed fin collars, providing a uniform mechanical bond that assures maximum heat transfer efficiency.

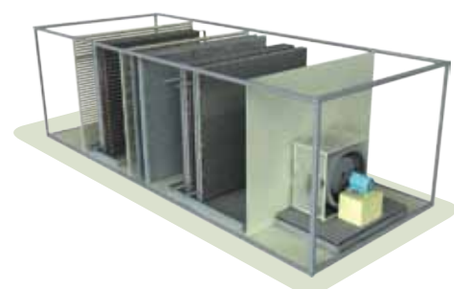
Fans
Furnished with single inlet centrifugal fans, (Plug fans) or double – inlet, backward -curved blades centrifugal fans. Fan motors are three-phase high efficiency, with life lubricated ball bearings.
All fans are statically and dynamically balanced.

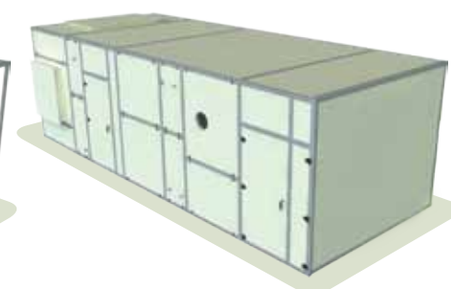
Filter section

Prefilters 12% to 60% filtration
Consist of G2-G4 or F5 arrestance, 50-100 mm thick panel filters. They arranged in "flat" or "V" bank, dependent on the air unit.
Roll filter are an option in this section.

Roll filter are available with special rolling motor system.







Medium efficiency filters 65% to 95% filteration
The FPR filter is rigid pocket filter especially design to remove fine dust, smoke vapors and bacteria.

FPR filters have 5 distinct rated efficiency ranges: F6-F9, H11.

Carbon filters
Are used to remove odors or gas from air being supplied to conditioned space by using the charcoal magazines filter.

High efficiency filters 99.999% filtration.
The DH filter is a very high efficiency filter manufactured with minipleat system specially designed for high flow capacity.

Due to its special design, the DH filter is usually used in HVAC in hospital, clean room, laboratories and controlled clean area.

Roll filter are available with special rolling motor system.

Plate type heat recuperates:

The plate heat recuperates are manufactured from aluminum with galvanized steel casing high efficiency.

Optional Features

- Evaporator coil 4/6/8/12 rows deep
- Cooling – only mode
- Electrical heater
- Economizer
- Heat recovery systems
- Glass shows
- Internal Illumination
- Low noise version: 2" housing construction, Double skin construction, super quiet operation
- Spacial silencer
- Differential pressure gauge
- Differential pressure switch

For special applications, please contact our Engineering Department, or sales manager.

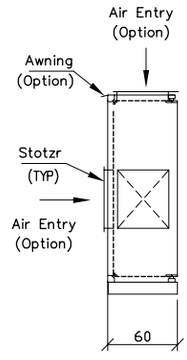
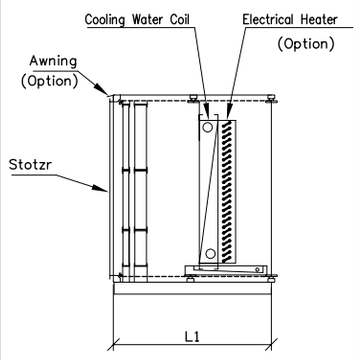
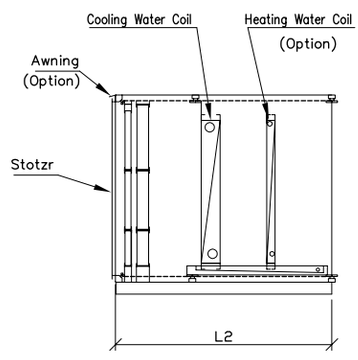
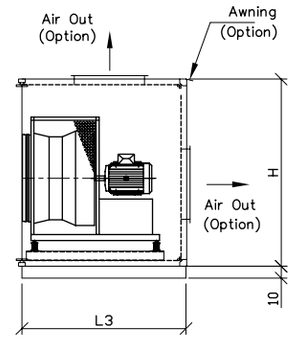
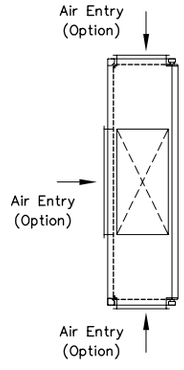
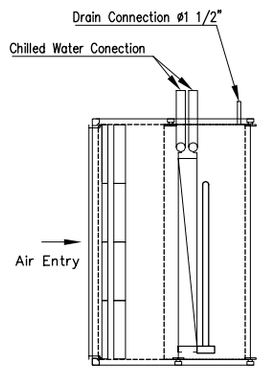
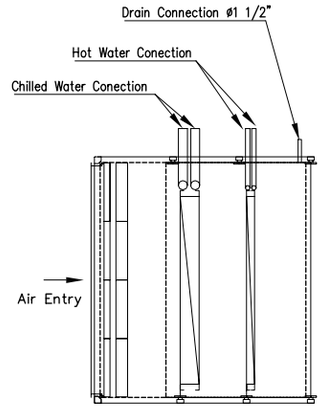
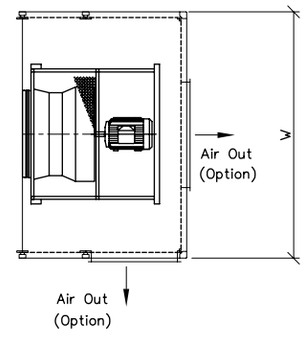
General Data

Series		AHU					
Model		6000	8000	10000	12000	16000	20000
Air Flow Rate							
	cfm	6000	8000	10000	12000	16000	20000
	m^3/hr	10200	13600	17000	20400	27200	34000
Filter (7)							
Face Area	m^2	1.65	2.23	2.68	2.97	3.87	5.02
	ft^2	18	24	29	32	42	54
Fan							
Type (8)(9)		Plug					
Diameter	mm	630	630	710	710	800	900
Static Pressure (10)	Inch w.g.	2.5	2.5	2.5	2.5	2.5	3
Motor	kW	5.5	5.5	7.5	7.5	15	22
Water Coil							
Face Area	m^2	1.14	1.5	1.95	2.43	3.04	3.86
	ft^2	12.3	16.1	21	26.2	32.7	41.5
Tube Diameter	Inch	3/8"	3/8"	3/8"	5/8"	5/8"	5/8"
Cooling Ciol(2)							
		Nominal Capacity(1)					
coil 4 rows (3)	kBTU/Hr	162.7	228.5	306.4	357.2	471.0	603.4
	kW	47.6	66.9	89.7	104.6	137.9	176.7
coil 6 rows (3)	kBTU/Hr	177.1	249.6	335.8	385.6	515.6	672.9
	kW	51.9	73.1	98.3	112.9	151	197
Heating Ciol(4)							
		Nominal Capacity(1)					
coil 2 rows (5)	kBTU/Hr	106.5	143.3	186	250.9	312.1	397
	kW	31.2	42	54.5	73.5	91.4	116.2
Electrical Heater(6)							
Nominal Capacity(1)	kW	32	42	54	73	92	114
	Stage	3	3	3	3	3	3
Dimensions (11)							
Length	cm	265	265	275	285	290	310
Width	cm	170	190	210	250	260	280
Height	cm	135	150	165	165	185	210
Weight	kg	910	1040	1210	1400	1560	1850

▲ Notes:

1. Nominal Cooling Capacity Based on Indoor Air temp. DB=80°F WB=67°F and Entering Water Temp. 45°F & Water Temp. Rise 10°F
   Nominal Heating Capacity Based on Indoor Air temp. DB=80°F WB=67°F and Entering Water Temp. 120°F
2. Base Model Include Cooling Coil 4 Rows Deep, Cooling Coil 6 rows Deep is Optionnal
3. 12 FPI for Cooling Coil 4 Rows Deep, and 10 FPI for Cooling Coil 6 Rows Deep
4. Water Heating Coil is Optional
5. Water Heating Coil with 12 FPI
6. Electrical Heater is Optional
7. Filter FARR30/30 is Optional
8. Centrifugal Fan is Optional
9. Belt Drive is Optional
10. According to the External Pressure Drop 150 Pa (0.6 inch w.g.)
11. Dimensions and Weight According to the Basic Model (without Mixing Box & Heating Water Coil)
12. Preliminary Data, Subject to Change without Notice

General View

MIXING BOX (Option)	FILTER and COILS BOX		FAN BOX (Basic Model)
	Basic Model	Option	
			
Side View	Side View	Side View	Side View
			
Plan	Plan	Plan	Plan

	AHU-6000	AHU-8000	AHU-10000	AHU-12000	AHU-16000	AHU-20000
L1, cm	135	135	135	145	145	145
L2, cm	185	185	185	195	195	195
L3, cm	130	130	140	140	145	165
W, cm	170	190	210	250	260	280
H, cm	125	140	155	155	175	200

Model AHU 6000

Nominal cooling capacity[1]: **13.6 TR**

Technical Data				
Air Flow Rate	cfm	6000		
	m^3/hr	10200		
Filter [2]				
Face Area	m^2	1.65		
	ft^2	17.8		
12% deep 2"	Qty.-dim.	2-24"x20"		
		4-20"x20"		
30% deep 2"	Qty.-dim.	2-24"x20"	Optional deep 4"	
		4-20"x20"		
Fan				
Type [3]		Plug		
Diameter	mm	630		
Static Pressure [4]	Inch w.g.	2.5		
Motor	kW	5.5		
	RPM	1415		
Water Coil				
Face Area	m^2	1.14		
	ft^2	12.3		
Tube Diameter	Inch	3/8"		
Cooling Ciol[6]				
FPI	12 for 4 rows		Optional 10 FPI	
	10 for 6 rows		Optional 12 FPI	
Heating Ciol[7]				
FPI	12		Optional 10 FPI	
Electrical Heater[8]				
	kW	32		
	Stage	3		

Heating Capacity for 2 Rows Coil (12 FPI) (Optional)				
Air Entering Temperature	DB/WB , °C	26.7/19.4		
	DB/WB , °F	80/67		
Water Entering Temp. °F (°C)	Water Temp. Rise °F (°C)	TC	Flow	PD
120 (49)	10 (5.6)	106.5	21.6	1.9

◀ Notes:

1. Nominal cooling capacity based on indoor air temp. DB=80°F WB=67°F and entering water temp. 45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows.
2. Filter FARR30/30 is Optional.
3. Centrifugal Fan is Optional
4. According to the External Pressure Drop 150 Pa (0.6 inch w.g.)
5. Belt Drive is Optional
6. Basic Model Include Cooling Coil 4 Rows and 12 FPI
7. Water Heating Coil is Optional
8. Electrical Heater is Optional

Dimensions [1]		
Length	cm	265
Width	cm	170
Height [1]	cm	135
Weight	kg	910
Water Conection [2]		
Chilled Water [3]	inch	2
Hot Water	inch	1 1/2

▲ Notes:

1. Dimensions and Weight According to the Basic Model (without Mixing Box & Heating Water Coil).
2. Connect Pipe can be Ordered from the Right or Left Side.
3. Tube Diameter Based on Nominal Fluid Flow Rate (indoor air temp. DB=80°F WB=67°F and entering water temp.45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows).

◀ Notes:

TC-Total Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 4 Rows Coil (12 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	145.9	116.4	36.8	5.7	191.7	138	48.5	9.5	226.5	154.3	57.4	13				
	10 (5.6)	120.6	103.4	24.4	2.6	162.1	124.3	32.8	4.6	196.5	140.8	39.8	6.5	264.7	168.2	53.5	11.4
	12 (6.7)	80.8	80.8	13.6	0.8	134.2	110.8	22.6	2.3	165.7	127	28	3.4	232.6	154.6	39.3	6.4
45 (7.2)	8 (4.4)	117.8	103.3	29.8	3.8	157.8	123.3	39.9	6.5	191.5	139.4	48.4	9.4	253.1	163.9	64	15.8
	10 (5.6)	98.1	91.4	19.9	1.8	132.3	111	26.8	3.1	**162.7**	**126.6**	**32.9**	**4.6**	228.1	153.5	46.2	8.6
	12 (6.7)	65.8	65.8	11.1	0.5	109.5	98.3	18.5	1.5	136.3	113.8	23	2.3	196.1	140	33.1	4.6
48 (8.9)	8 (4.4)	95.9	91.7	24.2	2.6	127.9	110.2	32.3	4.4	157.2	125.2	39.8	6.5	217.1	149.7	54.9	11.8
	10 (5.6)	66.4	66.4	13.4	0.7	108.2	99.2	21.9	2.1	133.2	113.8	27	3.1	191.1	138.9	38.7	6.1
	12 (6.7)	57.5	57.5	9.7	0.4	73.5	73.5	12.4	0.6	112.5	102.1	19	1.6	161.9	126.4	27.3	3.2

▲ Notes: **Nominal data**
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 6 Rows Coil (10 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	196.6	142.5	49.7	13.1	245.8	165.4	62.3	19.9	248.4	167.2	62.9	8.6	323	196.6	81.6	14.1
	10 (5.6)	176.8	132.5	35.8	7.1	226.2	155.8	45.9	11.3	214.4	152	43.4	4.3	290	182.2	58.6	7.5
	12 (6.7)	157.4	122.2	26.6	4.1	204.5	145.1	34.5	6.6	178.9	136.2	30.2	2.1	253.3	166.8	42.8	4.1
45 (7.2)	8 (4.4)	161.2	126.2	40.7	9	209.2	148.9	53	14.7	210	150.8	53.1	6.2	284.3	180.3	72	11
	10 (5.6)	144.1	117.1	29.2	4.9	189.2	139.1	38.3	8	177.1	136.3	35.8	3	250	166	50.6	5.7
	12 (6.7)	128.4	108.2	21.6	2.8	169.3	129.2	28.5	4.6	146.4	121.9	24.7	1.4	121.8	150.7	35.9	3
48 (8.9)	8 (4.4)	130	111.9	32.9	6	172.3	132.5	46.5	10.1	172.2	135.2	43.6	4.3	243.3	163.9	61.5	8.2
	10 (5.6)	117.6	104.6	23.8	3.3	154.6	123.8	31.3	5.5	144.1	122.1	29.2	2	208.8	149.9	42.3	4
	12 (6.7)	82.7	82.7	14	1.1	138.9	115.3	23.4	3.2	119.6	108.8	20.2	0.9	175.1	135.7	29.5	2.1

▲ Notes:
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Model AHU 8000

Nominal cooling capacity[1]: **19 TR**

Technical Data				
Air Flow Rate	cfm	8000		
	m^3/hr	13600		
Filter [2]				
Face Area	m^2	2.23		
	ft^2	24		
12% deep 2"	Qty.-dim.	6-24"24		
30% deep 2"	Qty.-dim.	6-24"24	Optional deep 4"	
Fan				
Type [3]		Plug		
Diameter	mm	630		
Static Pressure [4]	Inch w.g.	2.5		
Motor	kW	5.5		
	RPM	1445		
Water Coil				
Face Area	m^2	1.5		
	ft^2	16.1		
Tube Diameter	Inch	3/8		
Cooling Ciol[6]				
FPI	12 for 4 rows		Optional 10 FPI	
	10 for 6 rows		Optional 12 FPI	
Heating Ciol[7]				
FPI	12		Optional 10 FPI	
Electrical Heater[8]				
	kW	42		
	Stage	3		

Heating Capacity for 2 Rows Coil (12 FPI) (Optional)				
Air Entering Temperature	DB/WB , °C	26.7/19.4		
	DB/WB , °F	80/67		
Water Entering Temp. °F (°C)	Water Temp. Rise °F (°C)	TC	Flow	PD
120 (49)	10 (5.6)	143.3	29.1	3

◀ Notes:

1. Nominal cooling capacity based on indoor air temp. DB=80°F WB=67°F and entering water temp. 45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows.
2. Filter FARR30/30 is Optional.
3. Centrifugal Fan is Optional
4. According to the External Pressure Drop 150 Pa (0.6 inch w.g.)
5. Belt Drive is Optional
6. Basic Model Include Cooling Coil 4 Rows and 12 FPI
7. Water Heating Coil is Optional
8. Electrical Heater is Optional

Dimensions [1]		
Length	cm	265
Width	cm	190
Height [1]	cm	150
Weight	kg	1040
Water Conection [2]		
Chilled Water [3]	inch	2 1/2
Hot Water	inch	1 1/2

▲ Notes:

1. Dimensions and Weight According to the Basic Model (without Mixing Box & Heating Water Coil).
2. Connect Pipe can be Ordered from the Right or Left Side.
3. Tube Diameter Based on Nominal Fluid Flow Rate (indoor air temp. DB=80°F WB=67°F and entering water temp.45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows).

◀ Notes:

TC-Total Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 4 Rows Coil (12 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	203.3	158.9	51.4	8.8	264.1	187.4	66.6	14.5	305.6	207	77.3	19				
	10 (5.6)	170.9	142.7	34.5	4.2	228.1	170.7	46.2	7.2	274.1	192.7	55.5	10.2	360	226.9	73	17
	12 (6.7)	141.5	125.6	23.9	2.1	192.4	153.6	32.5	3.7	236	175.3	39.8	5.5	325.5	221	54.9	9.9
45 (7.2)	8 (4.4)	164.2	141	41.5	5.9	219.1	167.9	55.4	10.1	261.5	188.2	66.1	14.1	340.6	219.5	86.3	23.2
	10 (5.6)	138.7	126.2	28.1	2.8	186.4	152.3	37.7	4.9	**228.5**	**173.4**	**46.3**	**7.2**	313.6	207.9	63.5	13
	12 (6.7)	93.8	93.8	15.8	0.8	156.8	136.6	26.4	2.5	194.4	157.3	32.8	3.8	277.2	192.6	46.8	7.3
48 (8.9)	8 (4.4)	133.3	125.4	33.8	4	177.7	150	44.9	6.8	217.6	170.1	55	9.9	292.6	200.5	74.1	17.3
	10 (5.6)	98.2	98.2	19.9	1.4	151.9	135.9	30.7	3.3	187.6	155.7	37.9	4.9	266.5	189.4	54	9.6
	12 (6.7)	74.2	73.7	12.6	0.5	109.9	109.9	18.5	1.2	159.8	140.9	27	2.6	229.5	173.7	38.7	5.1

▲ Notes: **Nominal data**
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 6 Rows Coil (10 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	222.5	171.8	56.2	6	290.3	203.5	73.5	10	341.4	227.1	86.5	13.6				
	10 (5.6)	184.9	153.4	37.4	2.8	248.7	184.4	50.3	4.9	299.8	208.5	60.7	7	399.8	248.4	80.9	12
	12 (6.7)	151.2	134.7	25.5	1.2	207.6	165	35	2.4	256.2	189	43.2	3.7	355.9	229.6	60	6.8
45 (7.2)	8 (4.4)	178.7	151.8	45.2	4	240.4	181.7	60.8	7	289.9	205	73.4	9.9	386.4	243.2	97.7	17.1
	10 (5.6)	148.9	135.3	30.1	1.7	202.5	164.1	40.9	3.3	249.6	187.2	50.5	4.9	347.3	226.8	70.4	9.2
	12 (6.7)	111.9	111.9	18.9	0.7	168.3	146.4	28.4	1.5	209.7	169	35.4	2.5	302.4	208.1	51.1	5
48 (8.9)	8 (4.4)	144.1	134.6	36.5	2.7	194	161.7	49	4.6	239.2	183.9	60.5	6.9	334.2	222.1	84.6	13
	10 (5.6)	100.6	100.6	20.5	0.8	163.9	146	33.1	2.2	203	167.4	41.1	3.3	292.5	205	59.2	6.6
	12 (6.7)	92.2	92.2	15.6	0.5	111.9	111.9	18.9	0.6	171.4	151.1	28.9	1.6	349.6	187.2	42.1	3.4

▲ Notes:
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Model AHU 10000

Nominal cooling capacity[1]: **25.5 TR**

Technical Data				
Air Flow Rate	cfm	10000		
	m^3/hr	17000		
Filter [2]				
Face Area	m^2	2.68		
	ft^2	28.9		
12% deep 2"	Qty.-dim.	8-20"x20"		
		4-20"x12"		
30% deep 2"	Qty.-dim.	8-20"x20"	Optional deep 4"	
		4-20"x12"		
Fan				
Type [3]		Plug		
Diameter	mm	710		
Static Pressure [4]	Inch w.g.	2.5		
Motor	kW	7.5		
	RPM	1460		
Water Coil				
Face Area	m^2	1.95		
	ft^2	21		
Tube Diameter	Inch	3/8		
Cooling Ciol[6]				
FPI	12 for 4 rows		Optional 10 FPI	
	10 for 6 rows		Optional 12 FPI	
Heating Ciol[7]				
FPI	12		Optional 10 FPI	
Electrical Heater[8]				
	kW	54		
	Stage	3		

Heating Capacity for 2 Rows Coil (12 FPI) (Optional)				
Air Entering Temperature	DB/WB , °C	26.7/19.4		
	DB/WB , °F	80/67		
Water Entering Temp. °F (°C)	Water Temp. Rise °F (°C)	TC	Flow	PD
120 (49)	10 (5.6)	186	37.7	2.7

◀ Notes:

1. Nominal cooling capacity based on indoor air temp. DB=80°F WB=67°F and entering water temp. 45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows.
2. Filter FARR30/30 is Optional.
3. Centrifugal Fan is Optional
4. According to the External Pressure Drop 150 Pa (0.6 inch w.g.)
5. Belt Drive is Optional
6. Basic Model Include Cooling Coil 4 Rows and 12 FPI
7. Water Heating Coil is Optional
8. Electrical Heater is Optional

Dimensions [1]		
Length	cm	275
Width	cm	210
Height [1]	cm	165
Weight	kg	1210
Water Conection [2]		
Chilled Water [3]	inch	2 1/2
Hot Water	inch	2

▲ Notes:

1. Dimensions and Weight According to the Basic Model (without Mixing Box & Heating Water Coil).
2. Connect Pipe can be Ordered from the Right or Left Side.
3. Tube Diameter Based on Nominal Fluid Flow Rate (indoor air temp. DB=80°F WB=67°F and entering water temp.45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows).

◀ Notes:

TC-Total Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 4 Rows Coil (12 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	271.1	207.1	68.6	11.6	344.6	241.4	87.2	18.1	397.2	266.1	100.6	23.6				
	10 (5.6)	232.2	187.6	47	5.7	307.4	224.1	62.3	9.7	365.1	251.4	73.9	13.3	468	291.9	94.7	21
	12 (6.7)	195.8	168.2	33	3	264.4	203.6	44.6	5.2	320.8	231.2	54.1	7.4	436	277.9	73.6	13.1
45 (7.2)	8 (4.4)	219.4	183.4	55.5	7.8	289.4	217.4	73.1	13	340.4	241.8	86.2	17.6				
	10 (5.6)	187.7	166.1	38	3.8	252	200	50	6.6	**306.4**	**226.2**	**61.9**	**9.5**	408.6	267.5	82.6	16.2
	12 (6.7)	134.9	134.9	22.8	1.4	215.6	181	36.4	3.5	265.6	207.3	44.9	5.2	374.2	252.7	63.1	9.8
48 (8.9)	8 (4.4)	177.7	162.7	44.8	5.2	236.3	194.4	59.8	8.9	284.7	218.5	72	12.5	381.2	257.5	96.5	21.5
	10 (5.6)	136.1	136.1	27.5	2.1	204.6	178.1	41.5	4.5	251.6	203.1	51	6.6	349.8	244.1	70.9	12.1
	12 (6.7)	98.9	98.1	16.7	0.7	176.4	160.8	29.7	2.4	217.8	186	36.8	3.6	312.1	228.1	52.6	7

▲ Notes: **Nominal data**
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 6 Rows Coil (10 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	296.8	223.9	75.1	7.3	383	263.9	97	11.8	466.7	293..3	112.9	15.7				
	10 (5.6)	252.2	202.1	51.1	3.6	335.6	242	68	6.1	400	272.2	80.8	8.4	526.9	322.6	106.7	14.1
	12 (6.7)	209.4	179.7	35.3	1.7	286.1	218.8	48.3	3.2	349.8	249.6	59.1	4.7	477.3	301.2	80.6	8.3
45 (7.2)	8 (4.4)	239.3	197.7	60.5	4.9	319.5	235.9	80.8	8.4	382.9	265.6	97	11.7	499.1	311.3	126.5	19.3
	10 (5.6)	202	178	40.9	2.3	274.5	215.1	55.6	4.1	335.8	244.7	68	6	459.9	294.6	93	10.8
	12 (6.7)	136.6	136.6	23.2	0.7	232	194.1	39.1	2.1	288.3	223.1	48.7	3.2	408.6	273	68.9	6.2
48 (8.9)	8 (4.4)	191.7	175	48.5	3.2	258.6	209.7	65.4	5.6	317.3	238.1	80.3	8.2	432.7	284.3	109.5	14.6
	10 (5.6)	140	140	28.3	1	221.4	191.3	44.8	2.8	274.3	218.8	55.6	4.1	390.6	266.8	79.2	8
	12 (6.7)	118.9	118.9	20.1	0.5	188	171.5	31.7	1.3	234.4	199.4	39.6	2.2	340.6	246	57.5	4.4

▲ Notes:
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Model AHU 12000

Nominal cooling capacity[1]: **29.8 TR**

Technical Data				
Air Flow Rate	cfm	12000		
	m^3/hr	20400		
Filter [2]				
Face Area	m^2	2.97		
	ft^2	32		
12% deep 2"	Qty.-dim.	8-24"x24"		
30% deep 2"	Qty.-dim.	8-24"x24"	Optional deep 4"	
Fan				
Type [3]		Plug		
Diameter	mm	710		
Static Pressure [4]	Inch w.g.	2.5		
Motor	kW	7.5		
	RPM	1460		
Water Coil				
Face Area	m^2	2.43		
	ft^2	26.2		
Tube Diameter	Inch	5/8		
Cooling Ciol[6]				
FPI	12 for 4 rows		Optional 10 FPI	
	10 for 6 rows		Optional 12 FPI	
Heating Ciol[7]				
FPI	12		Optional 10 FPI	
Electrical Heater[8]				
	kW	73		
	Stage	3		

Heating Capacity for 2 Rows Coil (12 FPI) (Optional)				
Air Entering Temperature	DB/WB , °C	26.7/19.4		
	DB/WB , °F	80/67		
Water Entering Temp. °F (°C)	Water Temp. Rise °F (°C)	TC	Flow	PD
120 (49)	10 (5.6)	250.9	50.9	6.1

◀ Notes:

1. Nominal cooling capacity based on indoor air temp. DB=80°F WB=67°F and entering water temp. 45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows.
2. Filter FARR30/30 is Optional.
3. Centrifugal Fan is Optional
4. According to the External Pressure Drop 150 Pa (0.6 inch w.g.)
5. Belt Drive is Optional
6. Basic Model Include Cooling Coil 4 Rows and 12 FPI
7. Water Heating Coil is Optional
8. Electrical Heater is Optional

Dimensions [1]		
Length	cm	285
Width	cm	250
Height [1]	cm	165
Weight	kg	1400
Water Conection [2]		
Chilled Water [3]	inch	3
Hot Water	inch	2

▲ Notes:

1. Dimensions and Weight According to the Basic Model (without Mixing Box & Heating Water Coil).
2. Connect Pipe can be Ordered from the Right or Left Side.
3. Tube Diameter Based on Nominal Fluid Flow Rate (indoor air temp. DB=80°F WB=67°F and entering water temp.45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows).

◀ Notes:

TC-Total Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 4 Rows Coil (12 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	318.4	253.6	80.6	5.1	397.9	291.9	100.7	7.8	456.5	319.8	115.6	10.1	573.4	365.5	144.7	15.5
	10 (5.6)	273.1	230.8	55.3	2.5	355.5	271.9	72	4.1	420.1	303.3	85	5.6	532.3	348.1	107.7	8.8
	12 (6.7)	231.7	206.9	39.1	1.3	307.1	248.7	51.8	2.2	369.3	280.3	62.4	3.1	494	331.8	83.5	5.4
45 (7.2)	8 (4.4)	262.1	227.6	66.3	3.5	337.7	265.7	85.4	5.6	392.7	293.2	99.5	7.5	505	338.1	128	12.2
	10 (5.6)	226	206.8	45.8	1.7	297	246.1	60.1	2.9	**357.2**	**276.8**	**72.4**	**4.1**	465.1	321.4	94.1	6.8
	12 (6.7)	146.9	146.9	24.8	0.5	255.9	224.3	43.2	1.5	310.9	254.9	52.5	2.2	425.9	304.8	71.9	4.1
48 (8.9)	8 (4.4)	216.1	204.3	56.6	2.4	282.2	241.7	71.5	4	332.9	268.5	84.2	5.5	436.6	311.5	110.6	9.2
	10 (5.6)	155.1	155.1	31.4	0.8	246.7	222.4	50	2	297.9	251.5	60.2	2.9	400.2	296.2	80.9	5.1
	12 (6.7)	96.8	96.8	16.4	0.2	173.5	173.5	29.3	0.7	260.4	231.2	43.9	1.6	360.7	279	60.8	2.9

▲ Notes: ▬ Nominal data
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 6 Rows Coil (10 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	408.4	298.6	103.2	10.2	499	340.4	126.2	14.9	515.5	349.5	130.1	8.4	648	400.3	164.2	13.2
	10 (5.6)	381	284.6	77.1	5.9	472.1	327.3	95.7	8.8	456.9	323.6	92.6	4.4	601.7	381.1	121.8	7.4
	12 (6.7)	348.7	268	58.9	3.5	441.1	312.2	74.5	5.5	396.8	297	67	2.3	537	354	90.6	4.2
45 (7.2)	8 (4.4)	343.1	268.8	87	7.3	427.7	308.7	108.2	11.1	441.8	318.2	111.9	6.3	572	369.6	144.9	10.3
	10 (5.6)	316.7	255	64.2	4.1	103.3	296.7	81.7	6.5	385.6	293.7	78.1	3.1	523.3	349.4	105.8	5.6
	12 (6.7)	289.6	240.1	48.9	2.5	372.4	281.5	62.8	4	331.6	296.1	56	1.6	461	323.8	77.7	3.1
48 (8.9)	8 (4.4)	283.4	242	71.8	5.1	359.3	279.2	90.7	7.9	369.2	288.2	93.4	4.4	495.3	339.2	125.4	7.8
	10 (5.6)	261.9	229.8	53.1	2.9	337.2	268	68.2	4.6	320.2	266.1	64.9	2.2	445.4	319	90	4.1
	12 (6.7)	186.5	186.5	31.5	1.1	310.8	254.1	52.5	2.8	276.5	244	46.7	1.2	388.6	295.5	65.6	2.2

▲ Notes:
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Model AHU 16000

Nominal cooling capacity[1]: **39.3 TR**

Technical Data				
Air Flow Rate	cfm	16000		
	m^3/hr	27200		
Filter [2]				
Face Area	m^2	3.87		
	ft^2	41.7		
12% deep 2"	Qty.-dim.	15-20"x20"		
30% deep 2"	Qty.-dim.	15-20"x20"	Optional deep 4"	
Fan				
Type [3]		Plug		
Diameter	mm	800		
Static Pressure [4]	Inch w.g.	2.5		
Motor	kW	15		
	RPM	1470		
Water Coil				
Face Area	m^2	3.04		
	ft^2	32.7		
Tube Diameter	Inch	5/8		
Cooling Ciol[6]				
FPI	12 for 4 rows		Optional 10 FPI	
	10 for 6 rows		Optional 12 FPI	
Heating Ciol[7]				
FPI	12		Optional 10 FPI	
Electrical Heater[8]				
	kW	92		
	Stage	3		

Heating Capacity for 2 Rows Coil (12 FPI) (Optional)				
Air Entering Temperature	DB/WB , °C	26.7/19.4		
	DB/WB , °F	80/67		
Water Entering Temp. °F (°C)	Water Temp. Rise °F (°C)	TC	Flow	PD
120 (49)	10 (5.6)	312.1	55	4.7

◀ Notes:

1. Nominal cooling capacity based on indoor air temp. DB=80°F WB=67°F and entering water temp. 45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows.
2. Filter FARR30/30 is Optional.
3. Centrifugal Fan is Optional
4. According to the External Pressure Drop 150 Pa (0.6 inch w.g.)
5. Belt Drive is Optional
6. Basic Model Include Cooling Coil 4 Rows and 12 FPI
7. Water Heating Coil is Optional
8. Electrical Heater is Optional

Dimensions [1]		
Length	cm	290
Width	cm	260
Height [1]	cm	185
Weight	kg	1560
Water Conection [2]		
Chilled Water [3]	inch	3
Hot Water	inch	2 1/2

▲ Notes:

1. Dimensions and Weight According to the Basic Model (without Mixing Box & Heating Water Coil).
2. Connect Pipe can be Ordered from the Right or Left Side.
3. Tube Diameter Based on Nominal Fluid Flow Rate (indoor air temp. DB=80°F WB=67°F and entering water temp.45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows).

◀ Notes:

TC-Total Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 4 Rows Coil (12 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	420.6	334.8	106.6	7.3	519.3	382.4	131.5	10.8	595.5	419.2	150.9	14.1				
	10 (5.6)	365.2	306.7	73.9	3.6	471.9	360.1	95.4	5.9	548.9	398	111.3	7.9	694.3	456.2	140.6	12.3
	12 (6.7)	312.6	276.7	52.7	1.9	411.6	330.8	69.5	3.2	492	371.9	82.9	4.5	644.5	434.9	108.8	7.5
45 (7.2)	8 (4.4)	347.9	301.4	88.1	5	441.6	348.9	111.6	7.9	512.4	384.6	129.8	10.5	658.2	443.1	166.8	17
	10 (5.6)	302.3	275.2	61.2	2.5	395.8	326.6	80.2	4.2	**471.0**	**365.1**	**95.4**	**5.8**	606.8	421.5	122.8	9.4
	12 (6.7)	205.7	205.7	34.7	0.8	342.9	298.4	57.9	2.2	415.4	338.7	70	3.2	560.2	401.4	94.5	5.7
48 (8.9)	8 (4.4)	287.1	270.6	27.5	3.5	369.4	317.6	43.5	5.6	434.5	352.4	110	7.6	569	408.5	144.2	12.8
	10 (5.6)	212	212	42.8	1.3	329	291.5	66.6	2.9	396.4	333.3	80.2	4.2	522.3	388.7	105.7	7.1
	12 (6.7)	144.4	144.4	24.4	0.4	238.6	238.6	40.2	1.1	349.1	307.8	58.9	2.3	480.9	370	81.1	4.3

▲ Notes: Nominal data
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 6 Rows Coil (10 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	534	392.2	135	11.4	651.9	446.8	165	16.6	675.8	460	171.1	8.6	847.8	526.5	214.9	13.3
	10 (5.6)	503.3	376.2	101.9	6.7	617.1	429.7	125.2	9.9	608	429.8	122.9	4.6	792.2	502.7	160.6	7.6
	12 (6.7)	461.8	354.5	77.8	4.1	583.5	412.9	98.6	6.3	532.7	396.3	89.8	2.5	717.2	471.2	121	4.4
45 (7.2)	8 (4.4)	448	352.9	113.1	8.1	559	405.5	141.4	12.3	582.4	420.3	147.3	6.4	748.2	485.7	189.6	10.4
	10 (5.6)	418.8	337.2	84.9	4.8	527.1	389.7	106.9	7.3	515.6	390.9	104.4	3.3	693.7	492.9	140.6	5.9
	12 (6.7)	384.3	317.9	64.9	2.9	493	372.4	83.2	4.6	447.1	359.5	75.5	1.8	617.3	431.4	104.1	3.3
48 (8.9)	8 (4.4)	371.1	318.3	93.7	5.7	469.5	366.9	118.7	8.8	490.9	382.4	124.3	4.6	648	446.1	164.1	7.9
	10 (5.6)	346.3	303.5	70	3.3	443.1	353.1	89.8	5.2	428.8	354.3	86.9	2.3	593.5	423.6	120	4.3
	12 (6.7)	252.6	252.6	42.6	1.3	411.7	336.2	69.6	3.3	373.1	325.9	63	1.3	521.7	393.9	88.1	2.4

▲ Notes:
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Model AHU 20000

Nominal cooling capacity[1]: **50.3 TR**

Technical Data				
Air Flow Rate	cfm	20000		
	m^3/hr	34000		
Filter [2]				
Face Area	m^2	5.02		
	ft^2	54		
12% deep 2"	Qty.-dim.	9-20"x24"		
		6-24"x24'		
30% deep 2"	Qty.-dim.	9-20"x24"	Optional deep 4"	
		6-24"x24'		
Fan				
Type [3]		Plug		
Diameter	mm	900		
Static Pressure [4]	Inch w.g.	3		
Motor	kW	22		
	RPM	1470		
Water Coil				
Face Area	m^2	3.86		
	ft^2	41.5		
Tube Diameter	Inch	5/8		
Cooling Ciol[6]				
FPI	12 for 4 rows		Optional 10 FPI	
	10 for 6 rows		Optional 12 FPI	
Heating Ciol[7]				
FPI	12		Optional 10 FPI	
Electrical Heater[8]				
	kW	114		
	Stage	3		

Heating Capacity for 2 Rows Coil (12 FPI) (Optional)				
Air Entering Temperature	DB/WB , °C	26.7/19.4		
	DB/WB , °F	80/67		
Water Entering Temp. °F (°C)	Water Temp. Rise °F (°C)	TC	Flow	PD
120 (49)	10 (5.6)	397	70	6.1

◀ Notes:

1. Nominal cooling capacity based on indoor air temp. DB=80°F WB=67°F and entering water temp. 45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows.
2. Filter FARR30/30 is Optional.
3. Centrifugal Fan is Optional
4. According to the External Pressure Drop 150 Pa (0.6 inch w.g.)
5. Belt Drive is Optional
6. Basic Model Include Cooling Coil 4 Rows and 12 FPI
7. Water Heating Coil is Optional
8. Electrical Heater is Optional

Dimensions [1]		
Length	cm	310
Width	cm	280
Height [1]	cm	210
Weight	kg	1850
Water Conection [2]		
Chilled Water [3]	inch	3
Hot Water	inch	2 1/2

▲ Notes:

1. Dimensions and Weight According to the Basic Model (without Mixing Box & Heating Water Coil).
2. Connect Pipe can be Ordered from the Right or Left Side.
3. Tube Diameter Based on Nominal Fluid Flow Rate (indoor air temp. DB=80°F WB=67°F and entering water temp.45°F & Water Temp. Rise 10°F for Cooling Coil 4 Rows).

◀ Notes:

TC-Total Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 4 Rows Coil (12 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	538	424.5	136.2	7.7	664.4	485.1	168.3	11.5	762	532	193.1	15				
	10 (5.6)	479.6	394.7	97.2	4.1	611	459.7	123.9	6.5	703.4	505.3	142.3	8.4	889	579.1	180.1	13.1
	12 (6.7)	414.5	358.9	69.9	2.2	542	426.7	91.4	3.6	646.7	479.1	109.2	5.1	828.5	553.1	140	8.1
45 (7.2)	8 (4.4)	449.1	383.8	113.5	5.5	564.4	442	143	8.4	654.9	487	166	11.2	839.6	561	211.9	17.7
	10 (5.6)	396.2	354.1	80.2	2.8	516.2	418.1	104.4	4.6	**603.4**	**463.1**	**122.0**	**6.2**	777.8	535	157.5	10.1
	12 (6.7)	281.5	281.5	47.5	1	451.5	384.8	76.1	2.6	546.9	436	92.3	3.7	520.5	510.1	121.7	6.2
48 (8.9)	8 (4.4)	372.2	346.1	94.2	3.8	472.8	402.5	119.7	6	556.1	446.4	140.8	8.2	727.7	517.5	184.4	13.6
	10 (5.6)	283.8	283.8	57.4	1.5	429	378	87	3.3	512.3	424.5	103.9	4.6	670	492.8	135.6	7.6
	12 (6.7)	210.9	210.9	35.6	0.6	378.2	346.3	63.9	1.8	458.1	396	77.2	2.6	619	470	104.5	4.6

▲ Notes: ▬ Nominal data
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

Cooling Capacity for 6 Rows Coil (10 FPI)

Air Entering Temperature	DB/WB , °C	22.8/16.7				25/18.3				26.7/19.4				29.4/21.7			
	DB/WB , °F	73/62				77/65				80/67				85/71			
Water Entering Temp.	Water Temp. Rise °F (°C)	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD	TC	SC	Flow	PD
42 (5.6)	8 (4.4)	678.4	495.6	171.7	15.2	752.1	530.9	190.3	9.4	861.8	582.5	218.4	12.3				
	10 (5.6)	641.2	476.2	130	9	670.4	493.4	135.5	4.9	791.9	551	160.2	6.8	1010	637.3	204.6	10.8
	12 (6.7)	597.3	453	100.8	5.6	585.3	453.9	98.8	2.7	701.8	510.9	118.4	3.8	936.3	605.6	158.7	6.6
45 (7.2)	8 (4.4)	570	446	144.2	10.9	637.3	481	160.8	6.8	743.7	532.3	188.3	9.2	953.7	614.9	241.7	14.9
	10 (5.6)	537.8	428.3	108.8	6.4	559.4	445	113.3	3.5	672.9	500.8	136.4	5	886.2	586.6	179.2	8.4
	12 (6.7)	497	405.7	84	3.9	484.7	408.4	81.8	1.9	590	463.4	99.7	2.7	809.1	554.5	136.6	5
48 (8.9)	8 (4.4)	471.4	401.6	119.2	7.6	526.2	433.6	133.2	4.7	629.7	485.1	159.2	6.7	827	564.6	209.5	11.3
	10 (5.6)	445.1	385.6	90.3	4.5	460.1	400.6	93.2	2.4	560.3	453.7	113.6	3.5	765.3	539.1	155.2	6.3
	12 (6.7)	413.5	365.4	69.8	2.8	401.9	365.9	67.8	1.3	489.9	419.1	82.7	1.9	685.1	505.8	115.5	3.6

▲ Notes:
TC-Total Cooling Capacity, kBTU/Hr
SHC-Sensible Cooling Capacity, kBTU/Hr
Flow -Fluid Flow Rate, GPM
PD-Fluid Pressure Drop, WG feet

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