Engineering Product Data

Caring for the environment · R-410A · LG Air Conditioner

Single Package

(50Hz/R410A)

Life's Good

LG

5CUK0-01B

Replaces 5CUK0-01A

Introduction

Preface

Thank you very much for your special patronage of LG air conditioners.

LG's "Roof Top or Single Package" is an ideal choice when we talk about high load applications.

As the name Roof Top signifies, this unit is generally installed on the top of the roof. Also the Single Package signifies that both condenser and evaporator are enclosed in a single body(same as window type). The unit is used along with ducts and has flexible air flow as per installation conditions. The air flow can be horizontal or vertically downward which offers wider flexibility in the field applications.

Apart from common features, this unit offers some unique features like High & Low static driver kit, Oversize motor option, Manual Hood for fresh air intake, Compact design etc.

This unit is ideal for Single story and Double story houses as they offer high static pressure.

With its easy installation and simple control system, this product is suitable for Factories, Shopping malls, Multiplex, Hotels etc.

A lot of information regarding the design & installation of this system is provided in this edition. This new product series contains data on the same pattern.

Please utilize all the information for conducting your business efficiently.

Make sure the specification, dimensions and other technical data are same as provided in enginering data book before you start the project.

We look forward to your continuing support.

LG Electronics Inc.

Air Conditioning Division

Publication history

Pub. No.	Frequency	Category	Type	Product name	Refrigerant	Models	Notes	Published in
5CUK0-01A	50Hz	CAC	Single	Single Package	R410A	AK-H1208C00 AK-H1808C00 AK-H2408C00 EK-H1808C00 EK-H2408C00	New edition of EPDB	July.2006
5CUK0-01B	50Hz	CAC	Single	Single Package	R410A	AK-H1208C00	Model Update	Dec.2006

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1. Model line up

1.1 Heat Pump

Nominal Capacity	Model		Power Supply
Ton	Refrigerant	Model Name	Ø, V, Hz
10	R410A	AK-H1208C00	3Ø, 380-415V, 50Hz
15		AK-H1808C00	
		EK-H1808C00	
20		AK-H2408C00	
		EK-H2408C00	

2. Nomenclature

EK-H1808C00

Development Sequence

SEER Grade

Type \ SEER		10	11	12	13	14	15
3~5RT	MICOM Control	0	1	2	3	4	5
	Mechanical Cont.	A	B	C	D	E	F
6~6.5RT	There is no SEER regulation for these units so "0" is allotted to these units.						

Type of Flow

C: Convertible

Electric Standard (Volts, Freq., Phase)

8 : 380-415V, 50Hz, 3ø

Heating Capacity

Ex) 120 : 120,000 Btu/h, 180 : 180,000 Btu/h
240 : 240,000 Btu/h

Model Type

H : Heat Pump

Type of Air Conditioner

EK: LG Single Package Air Conditioner, Turkey, R410A
AK: LG Single Package Air Conditioner, Changwon, R410A

3. Features & Benefits

■ Easy Installation, Maintenance & Sevice

- Compact & light weight design
- U-shape Air Flow.
- Safety Condenser Fin Guard
- Forklift Base rail
- Easy access Panel.

■ Reliablity

- Time delay relay is standard component
- Low pressure Switch is standard component
- LG Scroll compressor with internal high-pressure & over-current protector
- Strainer is adopted
- Durable painting steel cabinet
- Factory charged refrigerant
- Direct-drive multi-speed PSC blower Motor.
- Direct-drive PSC condenser fan Motor

Easy Installation, Maintenance & Service

The unit can be installed outside to save valuable indoor space or where no ceiling space is available. Install the unit on the ground or on the roof. This means that the installation is totally flexible depending on your requirements.

Since the unit has not been split into two, maintenance is easy, especially because all access panels are on the same side of the unit and all wiring inside has been colour coded.

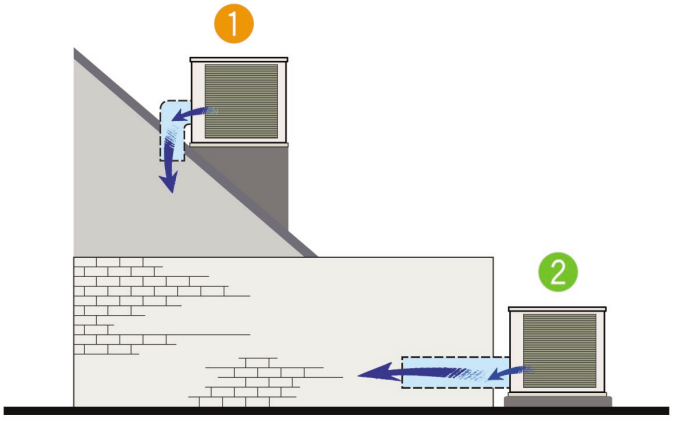
Additional functions available with duct system

All units come standard in Reverse Cycle, however electric heating can be added (Electric Heating provided by Specialist Dealers). You have complete control over the fresh air input, amount of air purification and zone controls (extras provided by Specialist Dealers), all using the powerful LG control system.

Typical Installation

① Roof Jack Installation

② Slab on Ground Installation



Cooling, Heating & Fan Operation :

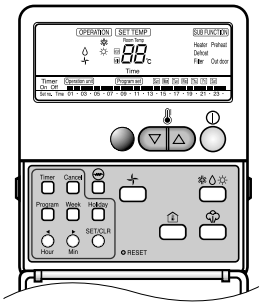
- LG air conditioners can provide cooling, heating & fan operation. In the cooling mode, it cools the air with an operation range of 18~30°C. In the heating mode, it heats the air with an operation range of 16~30°C. In the fan operation mode, only indoor fan at the selected speed will run, outdoor fan and compressor will be off.

Auto Restart Operation :

- Whenever there is electricity failure the system shuts off and resumption of the power, unit will start in the same mode as prior to the power failure. Memorized condition are on / off condition, operating mode (cooling/heating), set temperature and fan speed.

LCD Wired Remote Control :

- It can control all the functions of the unit. You can check/set temperature, change operation mode, set timer & also diagnose the error of the unit. It also has the weekly program.

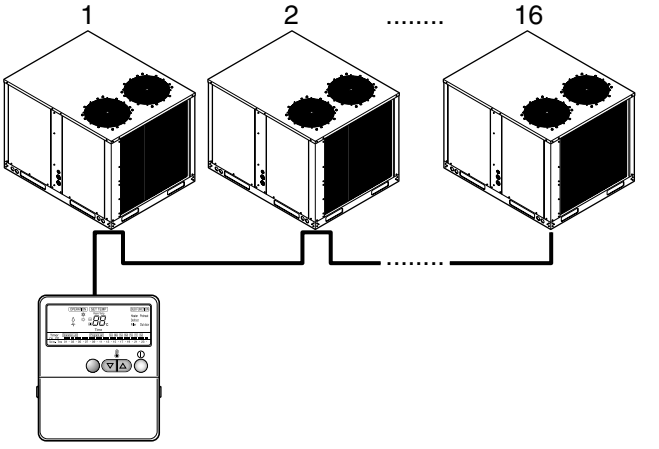


Two Thermistor Control(Return Air Control):(Accessory)

- There may be a significant difference between the return air temperature in the duct and the room temperature. Return air sensing tempeaturee is designed to control temperature more accurately by applying additional thermistor which senses the return air temperature inside the duct specially.
  After selecting the duct thermistor, which is connected to the main PCB, the room temperature measurement by LCD wired remote control thermistor is neglected. It helps to control the room temperature more accurately.(Thermistor is a field-installed accessory)

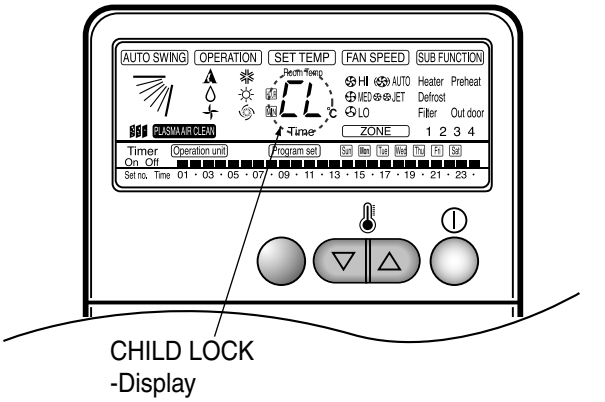
Group Control :

- It enables to control max of 16 units with the help of one wired remote controller. All the units will follow same setting of temperature & other sub functions.



Child Lock Function :

- It prevents the children or others from tampering with the control buttons. Unit can be controlled by the wireless remote controller. This can be easily set by pressing timer key & Min key simultaneously. After child lock is set, by pressing any key CL will be displayed on the LCD for 3 seconds and all the keys are ineffective.



Defrost / Deicing :

- In the heating mode, it prevents the ice formation on the outdoor unit. The heating cycle is reversed to the cooling cycle to defrost the evaporator pipe of the outdoor unit. While defrost cycle, the compressor is on and indoor fan, outdoor fan and 4-way valve are off.

Hot Start Function :

- During starting of the unit in the heating mode it prevents cold air blow from the unit.It starts the indoor fan only after indoor unit pipe temperature reaches a preset value.

Time Delay Relay :

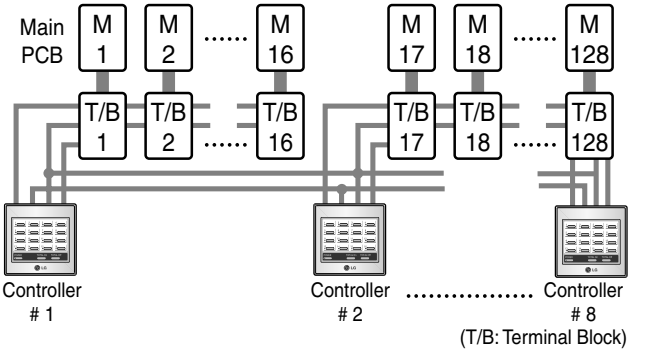
- It delays restarting of the compressor by three minutes thereby preventing damage to the compressor .

Self Diagnosis Function :

- This function provides diagnosis of the unit. An error code will be displayed on the LCD wired remote controller & diagnosis can be done as per the code indication.The same is also printed on key cover of the LCD wired remote controller.

Central Control :(Accessory)

- It enables to control 16 x 8 = 128 units with the help of 8 controllers. All units can be put on and off from one Central Room.For Setting Temperature, Fan Speed and other sub functions, access the LCD wired remote controller of each unit.

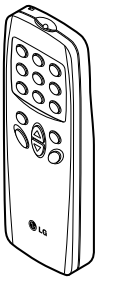


Weekly Program :

- It provides on / off schedule of operation for a period of one week.

Wireless Remote Control:(Accessory)

- It provides ease of control.



Electric Heater:(Accessory)

- Electric Heater can be used to provide heat in addition to cycle heat. It also provides quick heating. It can also work as a stand alone heater with only fan operation.

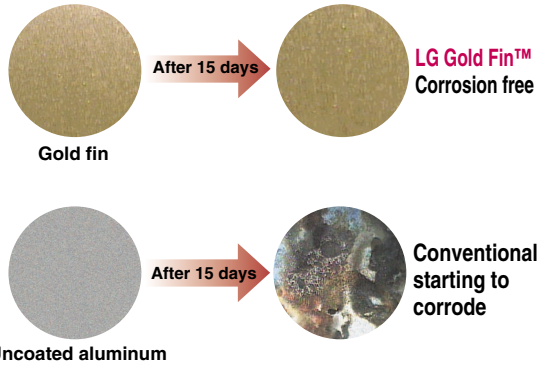
Fire Alarm Function:

- By purchasing a fire alarm locally, installation of the fire alarm is possible.In case of any fire, alarm will sound and the unit will be completely stopped.

Energy Saving Gold Fin:(Optional)

- Single Package Heat Exchanger fins are coated with anticorrosive & hydrophilic layers. It prevents the corrosion of heat exchanger. Fins remains as new even after long time and maintains efficiency of heat exchanger. Saves power & maintenance Cost.

[Salt spray test for 15 days]



Soft Start Function:

- All single package air conditioners has soft start function i.e. Indoor fan, outdoor fan & compressor start in sequence to prevent overcurrent during starting.

4. List of functions

Category	Function	AK-H1208C00	AK-H1808C00 EK-H1808C00	AK-H2408C00 EK-H2408C00
Air flow	Air supply outlet	1	1	1
	Airflow direction control(left & right)	-	-	-
	Airflow direction control(up & down)	-	-	-
	Auto swing(left & right)	-	-	-
	Auto swing(up & down)	-	-	-
	Airflow steps(fan/cool/heat)	-	-	-
	Chaos swing	-	-	-
	Chaos wind(auto wind)	-	-	-
	Jet cool(Power wind)	-	-	-
	Swirl wind	-	-	-
Air purifying	Deodorizing filter	-	-	-
	Plasma air purifier	-	-	-
	Prefilter(washable / anti-fungus)	O	O	O
Installation	Drain pump	-	-	-
	E.S.P. control	-	-	-
	Electric heater(operation)	Accessory	Accessory	Accessory
	High ceiling operation	-	-	-
Reliability	Hot start	-	-	-
	Self diagnosis	O	O	O
	Soft dry operation	O	O	O
	Defrost / Deicing	O	O	O
	High pressure switch	O	O	O
	Low pressure switch	O	O	O
	Phase protection	O	O	O
	Restart delay (3-minutes)	O	O	O
	Soft start	-	-	-
	Test function	O	O	O
Convenience	Auto changeover	-	-	-
	Auto cleaning	-	-	-
	Auto operation(artificial intelligence)	-	-	-
	Auto restart operation	O	O	O
	Child lock	O	O	O
	Forced operation	-	-	-
	Group control	O	O	O
	Sleep mode	-	-	-
	Timer(on/off)	O	O	O
	Timer(weekly)	O	O	O
	Two thermistor control	Accessory	Accessory	Accessory
Individual control	Standard wired remote controller	O	O	O
	Deluxe wired remote controller	-	-	-
	Simple wired remote controller	-	-	-
	Wired remote controller(for hotel use)	-	-	-
	Wireless remote controller(simple)	Accessory(AUWRHS)	Accessory(AUWRHS)	Accessory(AUWRHS)
	Wireless LCD remote control	-	-	-
CAC network function	General central controller (Non LGAP)	Accessory	Accessory	Accessory
	Dry contact	-	-	-
	Network Soluation(LGAP)	-	-	-
	PDI(power distribution indicator)	-	-	-
Special function kit	Zone control	-	-	-
	CTIE	Accessory	Accessory	Accessory
	Electro thermostat	-	-	-
	Low ambient operation	-	-	-
Others	-	-	-	-

Note:
O : Applied, X : Not applied, – : No relation
* Option : Model name & price are different according to options, and assembled in factory with main unit.
* Accessory : Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

5. Specifications

Nominal Capacity			(Ton)	10		15		20	
Models				AK-H1208C00		AK-H1808C00 EK-H1808C00		AK-H2408C00 EK-H2408C00	
Capacity	Gross Cooling Capacity		kW	34.6		50.1		69.1	
			Btu/h	118,000		171,000		235,900	
	Net Cooling Capacity		kW	32.8		48.6		65.9	
			Btu/h	112,000		166,000		225,000	
	Net Heating Capacity		kW	32.8		52.8		73.3	
			Btu/h	112,000		180,000		250,000	
Electrical Data	Power Supply		Ø / V / Hz	3/380~415/50		3/380~415/50		3/380~415/50	
	M.C.A	Cooling	A	38.2		57.2		74.4	
	(with Standard Motor)	Heating	A	38.2		57.2		74.4	
	Power Input	Cooling	W	14,400		20,000		26,500	
		Heating	W	11,600		17,000		27,800	
Performance	Air Circulation(Nominal)		CFM	3,700		5,500		8,000	
	EER		Btu/h.W	7.78		8.30		8.50	
	SEER		Btu/h.W	-		-		-	
	COP		W/W	2.83		3.10		2.64	
	Sound Rating		bell	9.20		9.20		9.20	
Indoor Coil	Type			High efficiency		High efficiency		High efficiency	
	Tube Size(O.D)		mm(inch)	9.52(3/8)		9.52(3/8)		9.52(3/8)	
	Rows / Column / FPI			3R / 44C / 16FPI		3R / 44C / 16FPI		3R / 52C / 16FPI	
	Length		mm(inch)	900(35 7/16)		1,000(39 6/16)		1,000(39 6/16)	
	Face Area		m^2(sq.ft)	1.01(10.8)		1.12(12.1)		1.32(14.2)	
Indoor Fan	Type * No. Used			Centrifugal Blower		Centrifugal Blower		Centrifugal Blower	
	Diameter		mm(inch)	380(14 31/32)		380(15)		460(18)	
	Width		mm(inch)	280(11 1/32)		380(15)		460(18)	
	Drive Type / Motor Step			Belt / 1		Belt / 1		Belt / 1	
	No. Motors			1		1		1	
	Motor Output(Standard / Oversized)		Hp	3.0 / 5.0		4.0 / 5.0		5.0 / 7.5	
	Motor RPM(Standard / Oversized)			1,400 / 1,430		1,380~1,400 / 1,400~1,430		2,892~2,900 / 2,870~2,900	
No. of Outdoor Units				-		-		-	
Compressor	Type * Quantity			SCROLL * 2(Non Tropical)		SCROLL * 3(Non Tropical)		SCROLL * 4(Non Tropical)	
	Model			ARA073YAA		AR073YAB		AR073YAB	
	Maker			LG		LG		LG	
	Capacity		Btu/h	62,000		61,000		61,000	
	Motor Type			Three Phase		Three Phase		Three Phase	
	Motor Input		W	6,020		6,289		6,289	
	Oil Type			FVC68D(PVE)		FVC68D(PVE)		FVC68D(PVE)	
	Oil Charge		cc	1,800±10		2,325±10		2,325±10	
Outdoor Coil	Type			High efficiency	High efficiency	Corrugate	Corrugate	Corrugate	Corrugate
	Tube Size(O.D)		mm(inch)	9.52(3/8)	9.52(3/8)	7(9/32)	7(9/32)	7(9/32)	7(9/32)
	Rows / Column / FPI			2R / 32C / 17FPI	2R / 32C / 17FPI	3R / 52C / 17FPI	2R / 42C / 17FPI	3R / 46C / 17FPI	3R / 46C / 17FPI
	Length		mm(inch)	1,100(43 5/16)	1,100(43 5/16)	1,300(51 3/16)	1,300(51 3/16)	2,000(78 12/16)	2,000(78 12/16)
	Face Area		m^2(sq.ft)	0.89(9.58)	0.89(9.58)	1.42(15.3)	1.15(12.3)	1.93(20.8)	1.93(20.8)
Outdoor Fan	Type * No. Used			Propeller * 2		Propeller * 2		Propeller * 4	
	Diameter		inch	23.6		23.6		22	
	Drive Type			Direct		Direct		Direct	
	Air Circulation		CFM	3,125		3,125		3,125	
	No. Motor / Motor Output(Hp)		Hp	2EA / 0.5		2EA / 0.5		4EA / 0.4	
	Motor RPM			910		910		950	
Service Valve	Liquid		mm(inch)	-		-		-	
	Gas		mm(inch)	-		-		-	
Connecting Tube	Liquid		mm(inch)	-		-		-	
	Gas		mm(inch)	-		-		-	
	Length(Standard)		mm(inch)	-		-		-	
Dehumidification Rate			l/h	8.10		13.3		20.0	
Drain Connection Size(inch)				1		1		1	
Refrigerant	Refrigerant Charge		kg	4.1/Circuit		4.65	2.9	5.6/Circuit	
			lbs	9.04/Circuit		10.25	6.39	12.35/Circuit	
			Type	R-410A		R-410A	R-410A	R-410A	
	Refrigerant Control			Capillary Tube		Capillary Tube	Capillary Tube	Capillary Tube	
Dimensions	Indoor Unit (W * H * D)		mm	-		-		-	
			inch	-		-		-	
	Outdoor Unit or S/Package		mm	2170 * 1244 * 1460		2,230 * 1,244 * 1,540		2,898 * 1,250 * 2,200	
	(W * H * D)		inch	85 7/16 * 49 * 57 8/16		87 13/16 * 49 * 60 10/16		114 2/16 * 49 3/16 * 86 10/16	
Net Weight	Indoor Unit		kg(lbs)	-		-		-	
	Outdoor Unit or S/Package		kg(lbs)	450(992)		550(1,212)		900(1,984)	
Fliter	Size * No. Used			925*418 * 1EA		1045*980 * 1EA		510*625 * 2ea	
	Filter Rack Thickness		inch	1, 2		1, 2		1, 2	

Notes:
1. Capacities are based on the following conditions:
   Cooling: - Indoor Temperature 27.0°C(80.6°F) DB/19.0°C(66.2°F) WB
   - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   Heating: - Indoor Temperature 20.0°C(68°F) DB/15.0°C(59°F) WB
   - Outdoor Temperature 7.0°C(44.6°F) DB/6.0°C(42.8°F) WB
   - Level Difference of Zero
2. Nominal CFM : Fan operation mode with clean filter, dry coil.
3. The specification may be subject to change without notic for purpose of improvement.

6. Dimensions

Model No.: AK-H1208C00

UNIT Dimensions (Figure B)

Unit: inch(mm)

UNITS	10RT
H	48 5/16 (1227)
I	54 13/16 (1392)
J	85 7/16 (2170)
K	45 1/16 (1144)
L	7 2/16 (181)
M	4 (100)

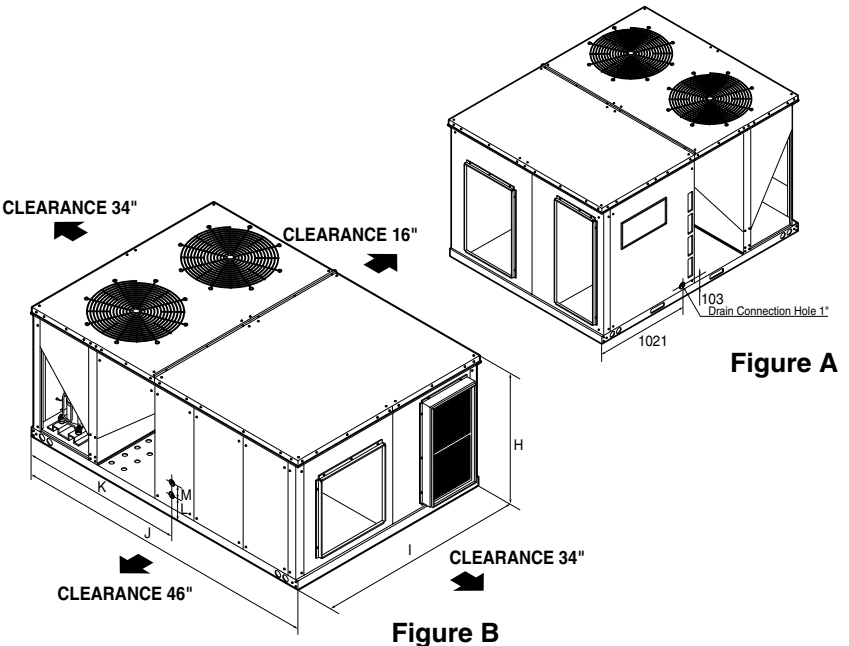


Figure A

Figure B

HORIZONTAL FLOW APPLICATION (Figure C)

Unit: inch(mm)

UNITS	10RT
A	18 8/16 (470)
B	11 15/16 (303)
C	15 8/16 (393)
D	1 8/16 (38)
E	3 15/16 (100)
F	35 8/16 (902)
G	4 (102)
H	30 10/16 (778)

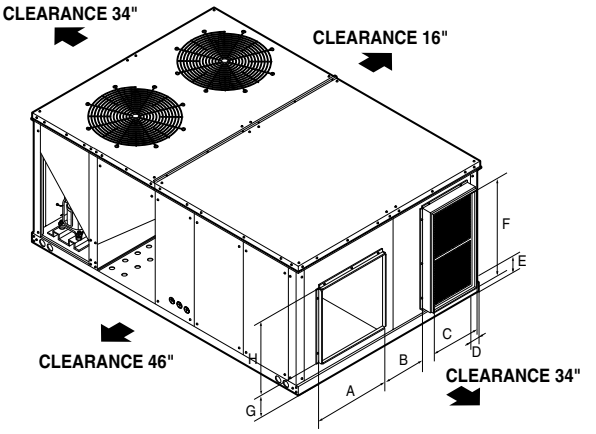


Figure C

DOWN FLOW APPLICATION (Figure D)

Unit: inch(mm)

UNITS	10RT
A	15 6/16 (390)
B	12 8/16 (317)
C	18 10/16 (473)
D	6 4/16 (158)
E	2 11/16 (68)
F	35 7/16 (900)
G	2 11/16 (68)
H	30 11/16 (780)

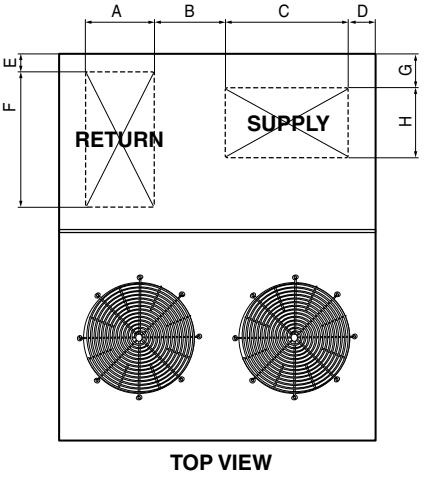


Figure D

Model No.: AK-H1808C00, EK-H1808C00

UNIT Dimensions (Figure A)

Unit: inch(mm)

UNITS	15/17.5RT
A	49 (1244)
B	60 10/16 (1540)
C	87 13/16 (2230)
D	44 3/16 (1123)
E	7 1/16 (180)
F	3 15/16 (100)

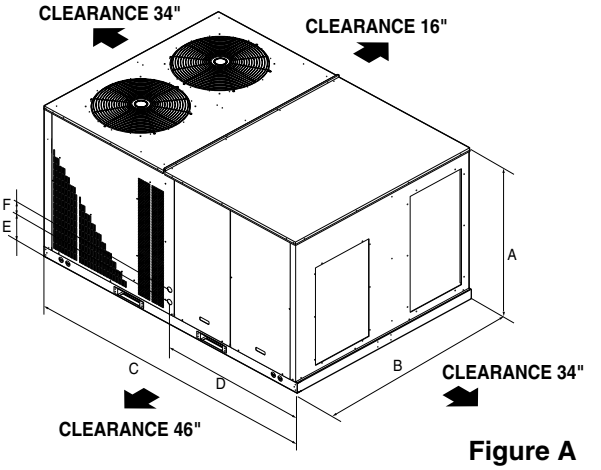


Figure A

HORIZONTAL FLOW APPLICATION (Figure B)

Unit: inch(mm)

UNITS	15/17.5RT
A	37 6/16 (950)
B	5 11/16 (145)
C	2 11/16 (68)
D	17 15/16 (455)
E	14 6/16 (365)
F	18 12/16 (476)
G	5 2/16 (130)
G	31 3/16 (800)

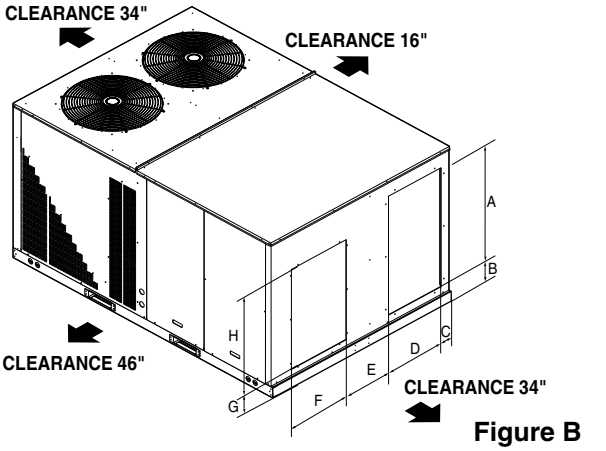


Figure B

DOWN FLOW APPLICATION (Figure C)

Unit: inch(mm)

UNITS	15/17.5RT
A	7 29/32 (455)
B	14 11/32 (364)
C	18 3/4 (476)
D	6 31/32 (177)
E	3 27/32 (98)
F	37 13/32 (950)
G	3 27/32 (98)
H	31 1/2 (800)

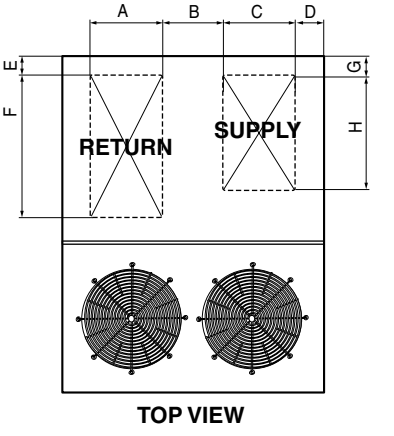


Figure C

Model No.: AK-H2408C00, EK-H2408C00

UNIT Dimensions (Figure A)

Unit: inch(mm)

UNITS	20 RT
H	49 3/16 (1250)
I	86 10/16 (2200)
J	114 2/16 (2898)
K	7 1/16 (180)
L	49 1/16 (1246)
M	3 2/16 (80)
N	3 2/16 (80)

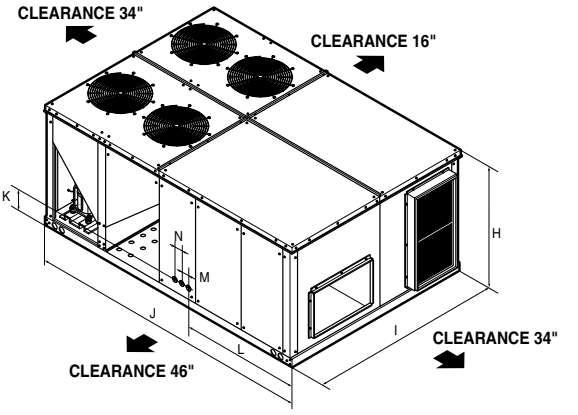


Figure A

HORIZONTAL FLOW APPLICATION (Figure B)

Unit: inch(mm)

UNITS	20 RT
A	34 12/16 (882)
B	17 (432)
C	23 11/16 (602)
D	3 6/16 (86)
E	6 10/16 (168)
F	39 7/16 (1002)
G	5 6/16 (137)
H	25 11/16 (652)

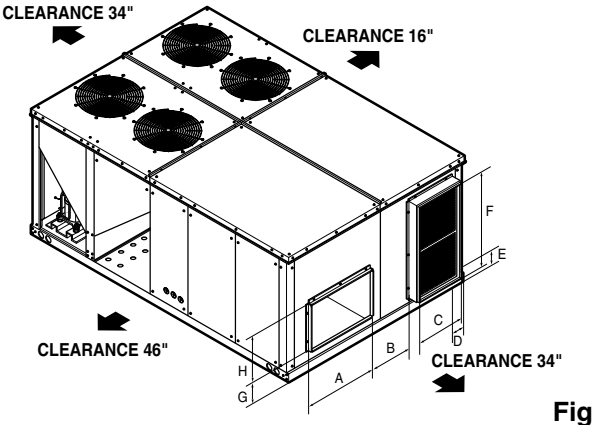
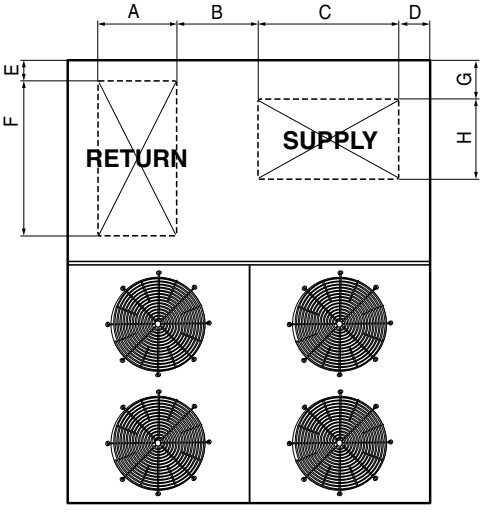


Figure B

DOWN FLOW APPLICATION (Figure C)

Unit: inch(mm)

UNITS	20 RT
A	23 5/8 (600)
B	15 5/8 (396)
C	34 12/16 (882)
D	6 10/16 (168)
E	6 9/16 (167)
F	39 6/16 (1000)
G	6 13/16 (173)
H	25 13/16 (655)



TOP VIEW

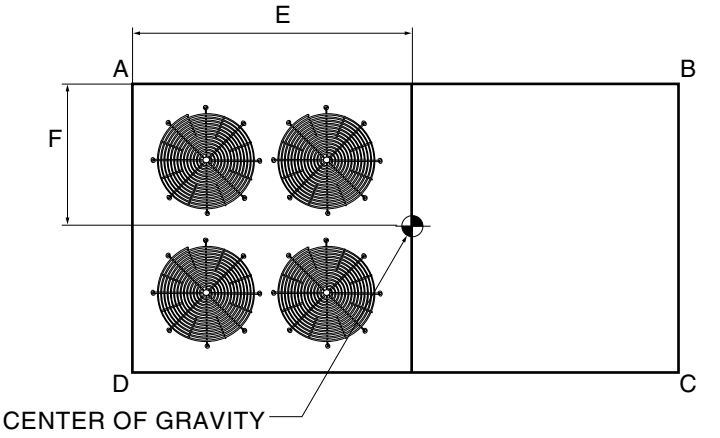
Figure C

Weights

Maximum Unit and Corner Weights (lbs) and Center of Gravity Dimensions (In.)

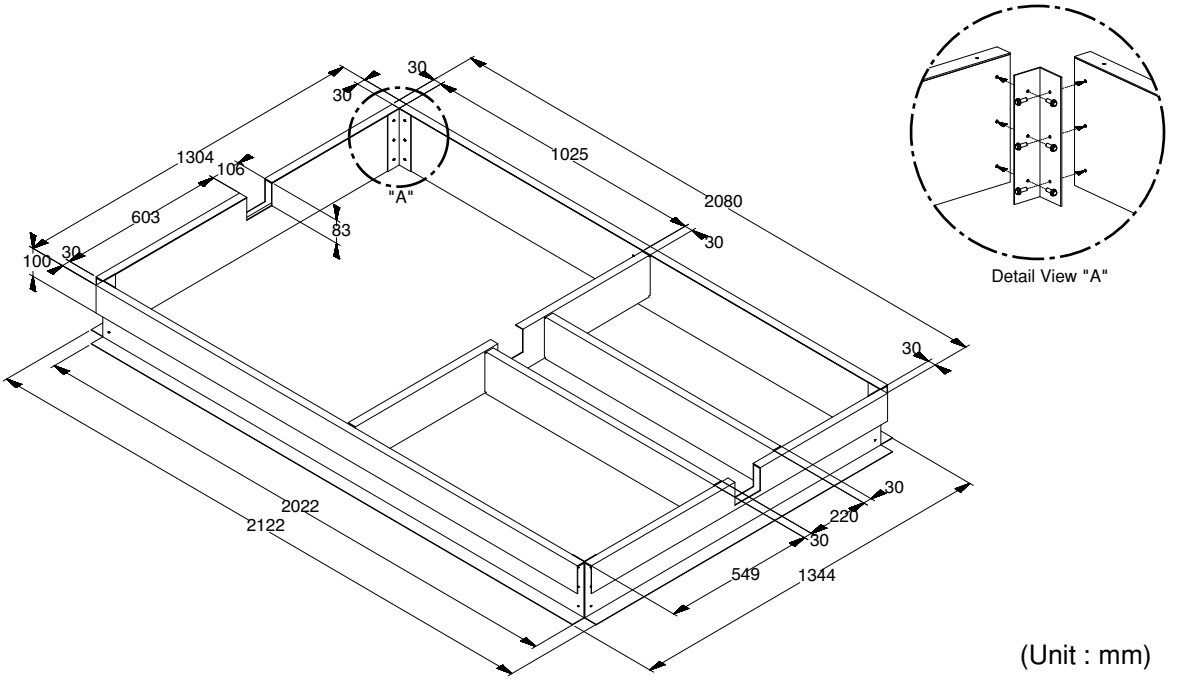
Tons	Unit Model No.	Maximum Weights (lbs)		Corner Weights (lbs)				Center of Gravity (mm)	
		Shipping	Net	A	B	C	D	E	F
10	AK-H1208C00	970	772	260	196	146	168	37	20
15	AK-H1808C00 EK-H1808C00	1455	1213	411	310	228	264	40	28
20	AK-H2408C00 EK-H2408C00	2171	1808	639	438	320	411	43	31

Note: 1.Corner weights are given for information only.
2. Weights are approximate.



7. Roof Curbs

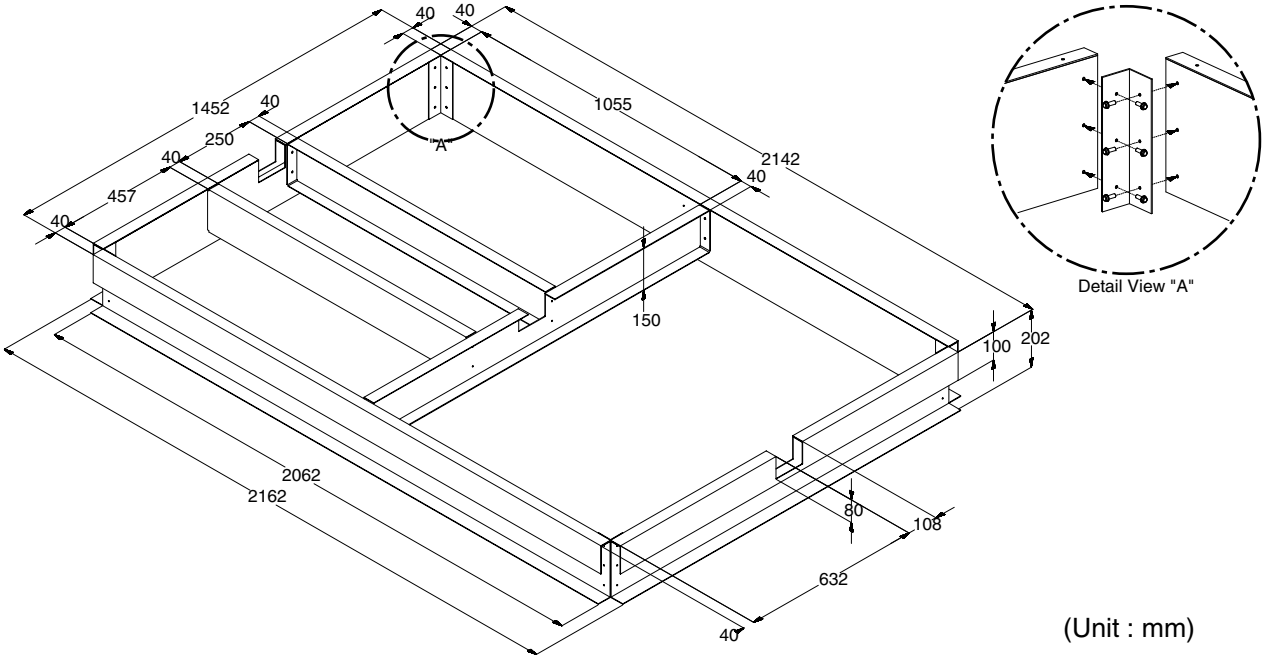
Model No.: AK-H1208C00



(Unit : mm)

Note: ① Roof Curb – Galvanized steel
② Remove the Fork Guides for Roof Curb installation

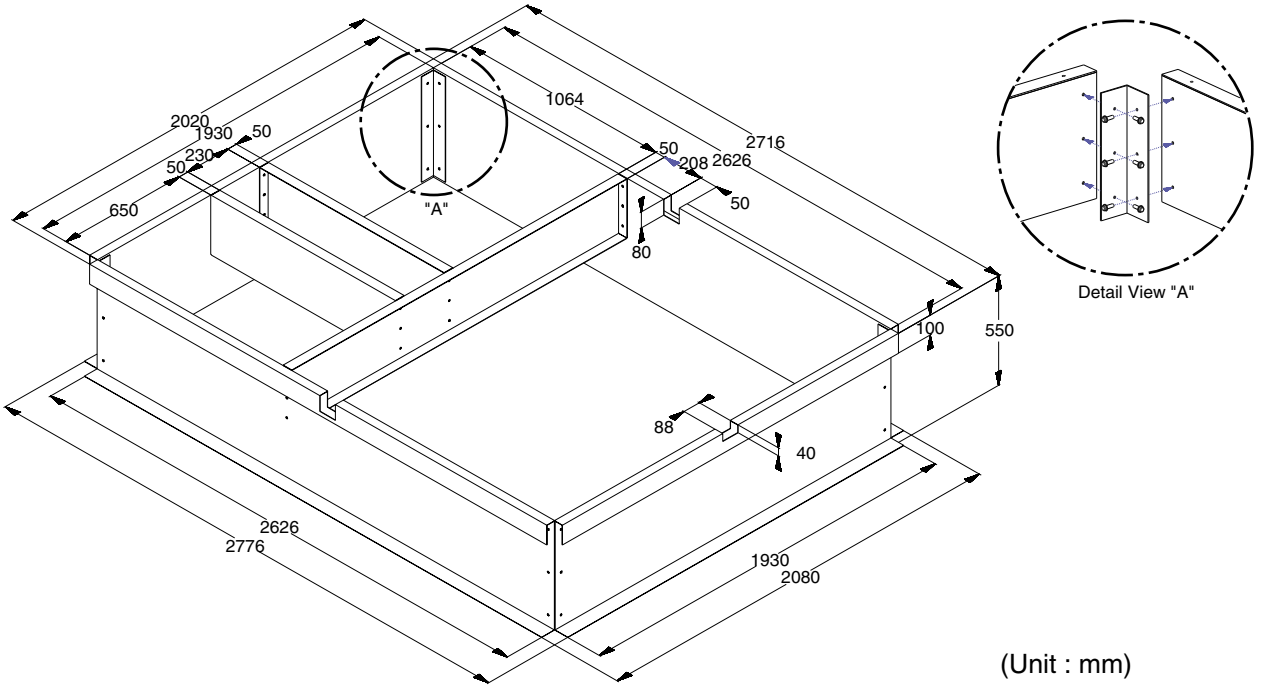
Model No. : EK-H1808C00/AK-H1808C00



(Unit : mm)

Note: ① Roof Curb – Galvanized steel
② Remove the Fork Guides for Roof Curb installation

Model No.: EK-H2408C00/AK-H2408C00

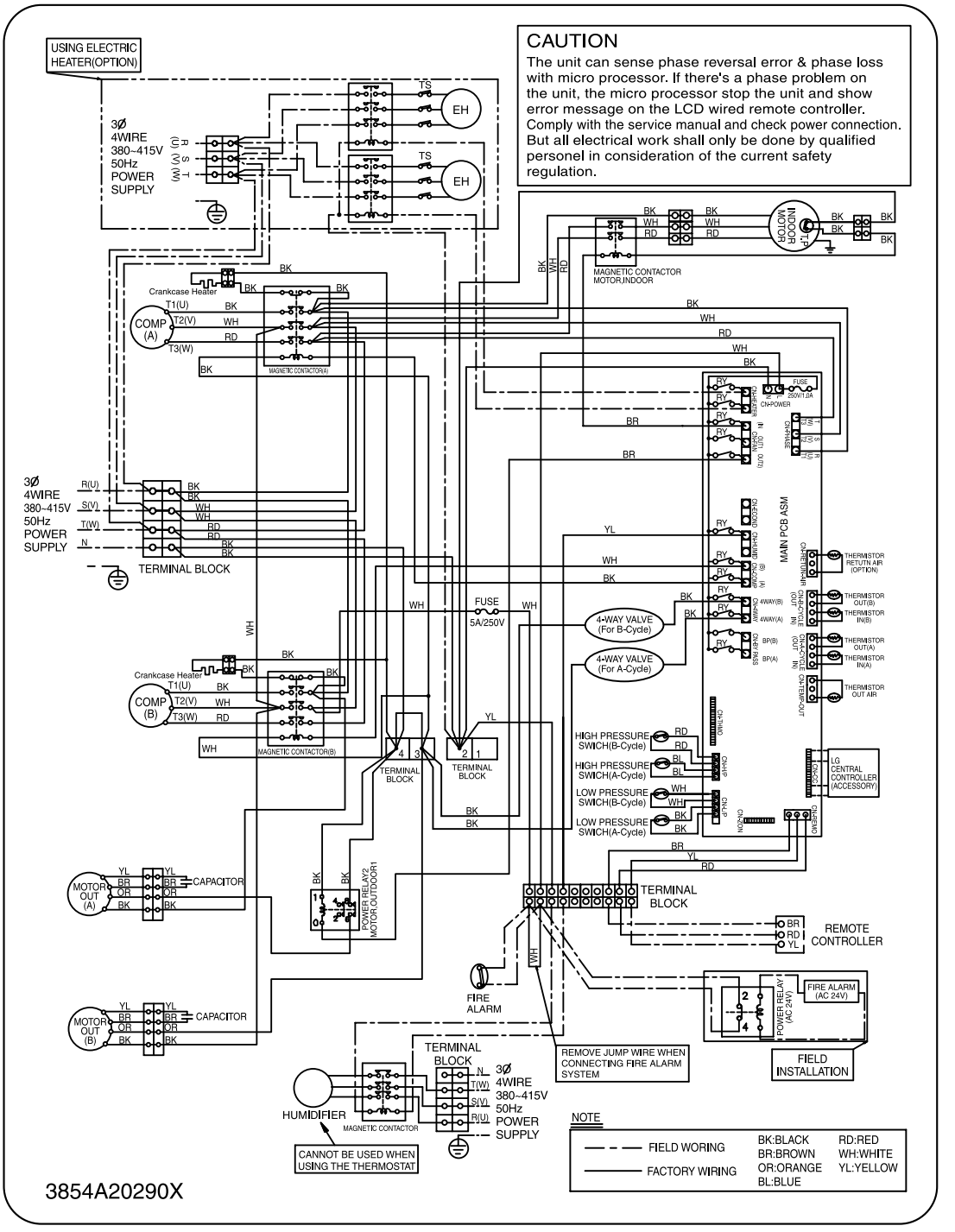


(Unit : mm)

Note: ① Roof Curb – Galvanized steel
② Remove the Fork Guides for Roof Curb installation

8. Wiring diagrams

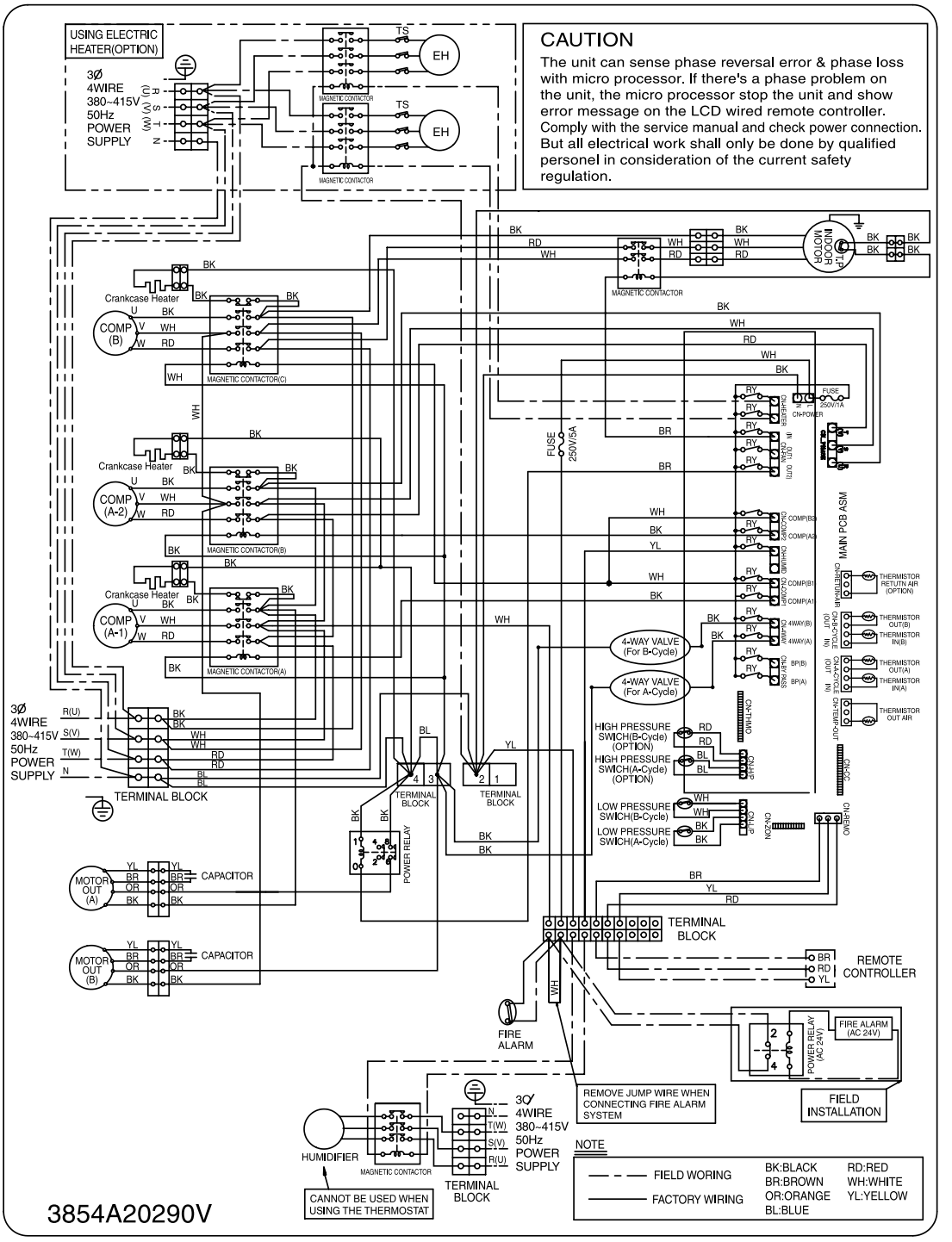
Model No.: AK-H1208C00



Notes:

RY	RELAY	EH	ELECTRIC HEATER	COMP	COMPRESSOR
BK	BLACK	OR	ORANGE	YL	YELLOW
BR	BROWN	RD	RED	BL	BLUE
WH	WHITE	———	FACTORY WIRING	—·—	FIELD WIRING

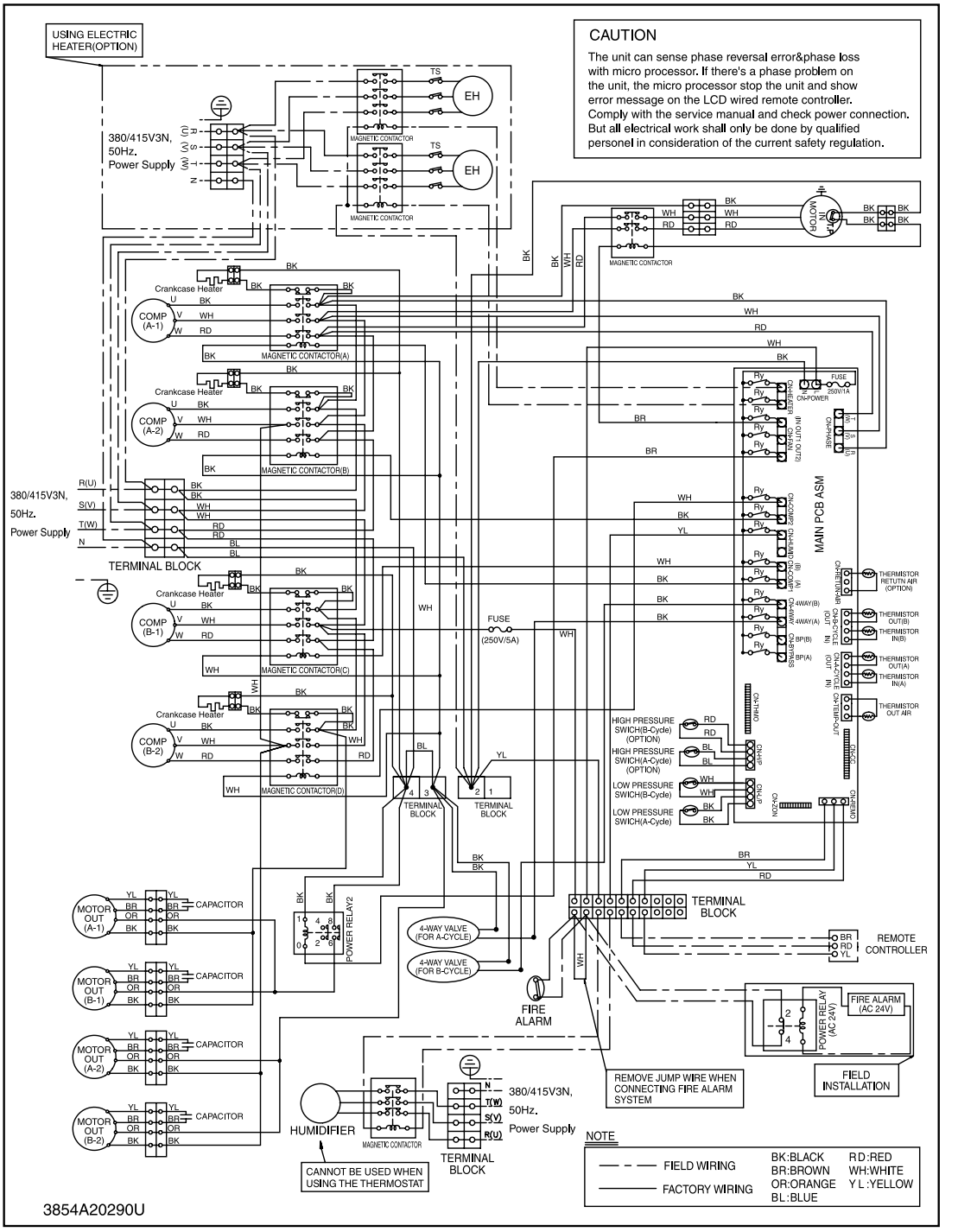
Model No.: AK-H1808C00, EK-H1808C00



Notes:

RY	RELAY	EH	ELECTRIC HEATER	COMP	COMPRESSOR
BK	BLACK	OR	ORANGE	YL	YELLOW
BR	BROWN	RD	RED	BL	BLUE
WH	WHITE	———	FACTORY WIRING	—·—	FIELD WIRING

Model No.: AK-H2408C00, EK-H2408C00



Notes:

RY	RELAY	EH	ELECTRIC HEATER	COMP	COMPRESSOR
BK	BLACK	OR	ORANGE	YL	YELLOW
BR	BROWN	RD	RED	BL	BLUE
WH	WHITE	———	FACTORY WIRING	—·—	FIELD WIRING

9. Selection procedure

Selection Procedure - Heat pump(English)

Cooling

Step 1. **Based on building's cooling load calculation from ASHRAE or any approved standard method.**

a. Cooling Capacity .....200,000 Btu/h
b. Sensible Cooling Capacity.....170,000 Btu/h
c. Heating Capacity .....200,000 Btu/h
d. Outdoor Entering-air Temperature .....95°F
e. Outdoor Air winter design Temperature(DB) .....39.2°F
f. Indoor Air winter design Temperature(DB).....68°F
g. Indoor Entering-air Temperature(DB/WB) .....80°F/67°F
f. Indoor air-flow.....8,000 CFM
g. Electrical Characteristics(V-Ph-Hz) .....380~415-3-50
h. External static pressure .....0.70 in.Aq.

Step 2. **Select unit based on required cooling capacity.**

Based on total cooling capacity choose suitable model from Specifications table.

20RT unit can be selected.

Verify the unit performance at the given conditions in accordance with step #3.

Step 3. From Gross Cooing Capacity(MBH) 20 ton EK-H2408C00 (English) table, at 8,000 CFM and 95 DB ambient temperature, with 80°F DB. 67°F WB air entering temperature.
Total cooling capacity= 235,900 Btu/h, Sensible capacity = 186,400 Btu/h

To find the capacity at intermediate points between any two values mentioned in the capacity table, interpolation should be used. Extrapolation is not recommended.

Selection Procedure

Step 4. The capacity estimated at step #3 is the gross capacity of the selected unit. The generated heat from indoor motor is a function of CFM & static pressure. The total unit static pressure is as follows:

External Static(Duct system)	0.70 in. Aq.
Standard Filter	0.1 in. Aq.
Total static pressure	0.8 in. Aq.

Evaporator fan motor performance table has deducted the pressure drop for filter already in the unit. Therefore, the actual total static pressure is 0.7 in. Aq.
With 8,000CFM and 0.7 in Aq., Evaporator Fan Performance EK-H2408C00 (English) table shows 3.6 BHP for this unit.
FAN MOTOR HEAT;
3.1 x Fan BHP = MBH
3.1 x 3.6 = 11.20 MBH
Now subtract the fan motor heat from the gross cooling capacity of the unit;

Net cooling capacity	235.9 MBH - 11.2 MBH = 224.7 MBH
Net sensible cooling	186.4 MBH - 11.2 = 175.2 MBH

• MBH = kBtu/h

Step 5. If the selected unit performance will not meet the required load, either total or sensible cooling, the next higher size unit should be selected.

Heating

Step 1. Calculate the building heating load using the ASHRAE calculation or from other standard accepted method.

Step 2. From Heating Capacity EK-H2408C00 (English), The heating capacity is 238,000 Btu/h at 8,000 CFM with 39.2°F outdoor DB temperature and 68°F indoor DB temperature. The required heating capacity is 200,000 Btu/h.
Since heating capacity 238,000 Btu/h is greater than required heating capacity 200,000 Btu/h. So additional electric heat is not required.

Step 3. If the selected unit performance will not meet the required load. The additional electric heater should be selected from Electric Heating Capacity table.

Selection Procedure - Heat pump(SI)

Cooling

Step 1. **Based on building's cooling load calculation from ASHRAE or any approved standard method.**

a. Cooling Capacity .....58.6 kW
b. Sensible Cooling Capacity.....49.8 kW
c. Heating Capacity .....58.6 kW
d. Outdoor Entering-air Temperature .....35°C
e. Outdoor Air winter design Temperature(DB) .....4°C
f. Indoor Air winter design Temperature(DB).....20°C
g. Indoor Entering-air Temp.(D.B/W.B) .....26.7°C / 19.4°C
f. Indoor air-flow.....3,776 l/s
g. Electrical Characteristics(V-Ph-Hz) .....380~415-3-50
h. External static pressure .....17.78mm Aq.

Step 2. **Select unit based on required cooling capacity.**

Based on total cooling capacity, choose suitable model from Specifications table.

20RT unit can be selected.

Verify the unit performance at the given conditions in accordance with step #3.

Step 3. From Gross Cooing Capacity(kW) 20 ton EK-H2408C00 (SI) table, at 3,776 l/s and 35°C outdoor ambient temperature, with 26.7°C DB. 19.4°C WB air entering temperature.
Total cooling capacity= 69.1kW, Sensible capacity = 54.6kW

To find capacity at intermediate conditions not in the table.

Interpolation should be used when design conditions are between two numbers that are in the capacity table. Extra-polation is not recommended.

Selection Procedure

Step 4. The capacity estimated at step #3 is the gross capacity of the selected unit. The generated heat from indoor motor is a function of l/s & static pressure. To determine the total unit static pressure.

External Static(Duct system)	17.78 mm Aq.
Standard Filter	2.54 mm Aq.
Total static pressure	20.32 mm Aq.

Evaporator fan motor performance table has deducted the pressure drop for filter already in the unit. Therefore, the actual total static pressure is 17.78 mm Aq.
With 3,776 l/s and 17.78 mm Aq., Evaporator Fan Performance EK-H2408C00 (SI) table shows 2.68 BkW for this unit.
FAN MOTOR HEAT;
1.22 x Fan Bkw = kW
1.22 x 2.68 = 3.27kW
Now subtract the fan motor heat from the gross cooling capacity of the unit;

Net cooling capacity	69.1kW - 2.68 kW = 66.42 kW
Net sensible cooling	54.6kW - 2.68 kW = 51.92 kW

Step 5. If the selected unit performance will not meet the required load, either total or sensible cooling, the next higher size unit should be selected.

Heating

Step 1. Calculate the building heating load using the ASHRAE calculation or from other standard accepted method.

Step 2. From Heating Capacity EK-H2408C00 (SI) table, The heating capacity is 69.7 kW at 3,776 l/s with 4°C outdoor temperature and 20°C indoor temperature. The required heating capacity is 58.6kW. Since heating capacity 69.7kW is greater than required heating capacity 58.6kW. So, additional electric heat is not required.

Step 3. If the selected unit performance will not meet the required load. The additional electric heater should be selected from Electric Heating Capacity table.

10. Performance data

Gross Cooling Capacity (kW) 10 ton AK-H1208C00 (SI)

Outdoor DB(°C)		29.4									35.0								
Indoor WB(°C)		16.1			19.4			22.8			16.1			19.4			22.8		
l/s	DB(°C)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
1397	23.9	31.1	24.7	12.80	34.4	18.6	13.21	36.9	8.3	13.45	29.0	23.7	14.01	32.0	17.8	14.45	34.4	7.9	14.72
	26.7	32.4	28.3	12.84	35.0	23.4	13.25	37.0	15.3	13.49	30.2	27.1	14.05	32.6	22.5	14.49	34.5	14.6	14.76
	29.4	33.7	31.1	12.88	35.5	28.1	13.29	36.9	21.2	13.53	31.4	29.8	14.09	33.1	26.9	14.54	34.4	20.3	14.81
	32.2	34.8	32.8	12.92	35.9	31.3	13.33	36.6	25.9	13.57	32.4	31.4	14.13	33.4	30.0	14.58	34.1	24.8	14.85
1571	23.9	32.4	27.3	12.92	35.8	20.5	13.33	38.5	9.1	13.57	30.2	26.1	14.13	33.4	19.6	14.58	35.9	8.7	14.85
	26.7	33.8	31.2	12.96	36.4	25.8	13.37	38.5	16.9	13.61	31.5	29.9	14.17	34.0	24.7	14.62	35.9	16.1	14.89
	29.4	35.1	34.2	13.00	37.0	30.9	13.41	38.4	23.4	13.65	32.7	32.7	14.22	34.5	29.6	14.67	35.8	22.4	14.94
	32.2	36.2	36.2	13.03	37.4	34.5	13.45	38.2	28.6	13.69	33.8	33.8	14.26	34.8	33.0	14.71	35.6	27.4	14.98
1746	23.9	33.4	29.7	13.06	36.9	22.3	13.47	39.6	9.9	13.72	31.1	28.4	14.28	34.4	21.4	14.73	37.0	9.5	15.01
	26.7	34.8	34.0	13.10	37.5	28.1	13.51	39.7	18.3	13.76	32.4	32.4	14.33	35.0	26.9	14.78	37.0	17.6	15.05
	29.4	36.1	36.1	13.13	38.1	33.7	13.55	39.6	25.4	13.80	33.7	33.7	14.37	35.5	32.2	14.82	36.9	24.4	15.10
	32.2	37.3	37.3	13.17	38.5	37.5	13.59	39.3	31.1	13.84	34.8	34.8	14.41	35.9	35.9	14.87	36.6	29.8	15.14
1921	23.9	34.0	31.8	13.13	37.6	23.9	13.54	40.4	10.6	13.79	31.7	30.4	14.36	35.0	22.9	14.82	37.7	10.2	15.09
	26.7	35.5	35.5	13.17	38.3	30.1	13.58	40.4	19.6	13.83	33.1	33.1	14.41	35.7	28.8	14.86	37.7	18.8	15.14
	29.4	36.8	36.8	13.21	38.8	36.0	13.62	40.3	27.2	13.88	34.3	34.3	14.45	36.2	34.5	14.90	37.6	26.1	15.18
	32.2	38.0	38.0	13.25	39.2	39.2	13.66	40.1	33.3	13.92	35.4	35.4	14.49	36.6	36.6	14.95	37.3	31.9	15.23
2095	23.9	34.3	33.6	13.20	37.9	25.3	13.62	40.8	11.3	13.87	32.0	32.0	14.44	35.3	24.2	14.90	38.0	10.8	15.17
	26.7	35.8	35.8	13.24	38.6	31.9	13.66	40.8	20.8	13.91	33.4	33.4	14.49	36.0	30.5	14.94	38.0	19.9	15.22
	29.4	37.1	37.1	13.28	39.2	38.1	13.70	40.7	28.8	13.95	34.6	34.6	14.53	36.5	36.5	14.99	37.9	27.6	15.26
	32.2	38.4	38.4	13.32	39.6	39.6	13.74	40.4	35.3	13.99	35.8	35.8	14.57	36.9	36.9	15.03	37.7	33.8	15.31

Outdoor DB(°C)		40.6									46.1									51.7								
Indoor WB(°C)		16.1			19.4			22.8			16.1			19.4			22.8			16.1			19.4			22.8		
l/s	DB(°C)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
1397	23.9	26.2	22.3	15.38	29.0	16.8	15.87	31.1	7.5	16.16	22.1	20.4	17.05	24.5	15.4	17.59	26.3	6.8	17.91	24.4	22.8	16.58	27.0	17.2	17.10	29.0	7.6	17.42
	26.7	27.3	25.5	15.43	29.5	21.1	15.92	31.2	13.8	16.21	23.1	23.1	17.10	24.9	19.4	17.64	26.3	12.6	17.97	25.5	25.5	16.63	27.5	21.6	17.15	29.1	14.1	17.47
	29.4	28.4	28.0	15.47	29.9	25.3	15.96	31.1	19.1	16.26	24.0	24.0	17.15	25.3	23.2	17.69	26.2	17.5	18.02	26.5	26.5	16.68	27.9	25.9	17.20	29.0	19.6	17.52
	32.2	29.3	29.3	15.52	30.2	28.2	16.01	30.9	23.4	16.31	24.7	24.7	17.20	25.5	25.5	17.75	26.1	21.4	18.08	27.3	27.3	16.73	28.2	28.2	17.25	28.8	23.9	17.57
1571	23.9	27.3	24.6	15.52	30.2	18.5	16.01	32.5	8.2	16.30	23.1	22.5	17.20	25.5	16.9	17.74	27.4	7.5	18.07	25.5	25.2	16.72	28.1	18.9	17.25	30.3	8.4	17.57
	26.7	28.5	28.1	15.57	30.7	23.3	16.06	32.5	15.2	16.35	24.1	24.1	17.25	25.9	21.4	17.80	27.4	13.9	18.13	26.6	26.6	16.77	28.6	23.9	17.30	30.3	15.6	17.62
	29.4	29.6	29.6	15.61	31.2	27.8	16.10	32.4	21.0	16.40	25.0	25.0	17.31	26.3	25.6	17.85	27.3	19.3	18.18	27.6	27.6	16.82	29.1	28.5	17.35	30.2	21.6	17.68
	32.2	30.5	30.5	15.66	31.5	31.1	16.15	32.2	25.7	16.45	25.8	25.8	17.36	26.6	26.6	17.90	27.2	23.6	18.24	28.5	28.5	16.87	29.4	29.4	17.41	30.0	26.4	17.73
1746	23.9	28.1	26.7	15.68	31.1	20.1	16.18	33.4	8.9	16.48	23.7	23.7	17.39	26.3	18.4	17.93	28.2	8.2	18.27	26.2	26.2	16.90	29.0	20.6	17.44	31.2	9.2	17.76
	26.7	29.3	29.3	15.73	31.7	25.3	16.23	33.4	16.5	16.53	24.8	24.8	17.44	26.7	23.2	17.99	28.2	15.2	18.32	27.4	27.4	16.95	29.5	26.0	17.49	31.2	16.9	17.81
	29.4	30.5	30.5	15.78	32.1	30.3	16.28	33.3	22.9	16.58	25.7	25.7	17.49	27.1	27.1	18.04	28.2	21.0	18.38	28.4	28.4	17.00	29.9	29.9	17.54	31.1	23.5	17.87
	32.2	31.5	31.5	15.83	32.5	32.5	16.33	33.1	28.0	16.63	26.6	26.6	17.54	27.4	27.4	18.10	28.0	25.7	18.43	29.3	29.3	17.06	30.3	30.3	17.59	30.9	28.7	17.92
1921	23.9	28.7	28.6	15.77	31.7	21.5	16.27	34.1	9.6	16.57	24.2	24.2	17.48	26.8	19.7	18.03	28.8	8.8	18.37	26.7	26.7	17.00	29.5	22.0	17.53	31.8	9.8	17.86
	26.7	29.9	29.9	15.82	32.3	27.1	16.32	34.1	17.7	16.62	25.2	25.2	17.53	27.2	24.9	18.09	28.8	16.2	18.42	27.9	27.9	17.05	30.1	27.8	17.59	31.8	18.1	17.91
	29.4	31.0	31.0	15.87	32.7	32.4	16.37	34.0	24.5	16.67	26.2	26.2	17.59	27.6	27.6	18.14	28.7	22.5	18.48	28.9	28.9	17.10	30.5	30.5	17.64	31.7	25.1	17.96
	32.2	32.0	32.0	15.91	33.1	33.1	16.42	33.8	30.0	16.72	27.1	27.1	17.64	27.9	27.9	18.20	28.5	27.5	18.53	29.9	29.9	17.15	30.8	30.8	17.69	31.5	30.7	18.02
2095	23.9	28.9	28.9	15.86	32.0	22.8	16.36	34.4	10.1	16.66	24.4	24.4	17.58	27.0	20.9	18.13	29.0	9.3	18.47	27.0	27.0	17.09	29.8	23.3	17.63	32.0	10.4	17.96
	26.7	30.2	30.2	15.91	32.5	28.7	16.41	34.4	18.7	16.71	25.5	25.5	17.63	27.5	26.3	18.19	29.0	17.2	18.52	28.1	28.1	17.14	30.3	29.4	17.68	32.1	19.2	18.01
	29.4	31.3	31.3	15.95	33.0	33.0	16.46	34.3	26.0	16.76	26.4	26.4	17.68	27.9	27.9	18.24	29.0	23.8	18.58	29.2	29.2	17.19	30.8	30.8	17.73	32.0	26.6	18.06
	32.2	32.3	32.3	16.00	33.4	33.4	16.51	34.1	31.8	16.81	27.3	27.3	17.74	28.2	28.2	18.30	28.8	28.8	18.64	30.2	30.2	17.24	31.1	31.1	17.79	31.8	31.8	18.12

Notes:

1. All capacities are gross, evaporator fan motor heat is not deducted. To obtain net cooling capacity, subtract evaporator fan motor heat.
2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)
3. l/s = Liters per second
4. TGC = Total Gross Cooling Capacity(Unit : kW)
5. SHC = Sensible Heat Capacity(Unit : kW)
6. PI = Power Input(kW), Sum of Compressor & Outdoor Fan Power Input

Gross Cooling Capacity (kW) 15 ton AK-H1808C00, EK-H1808C00 (SI)

Outdoor DB(°C)		29.4									35.0								
Indoor WB(°C)		16.1			19.4			22.8			16.1			19.4			22.8		
l/s	DB(°C)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
2077	23.9	43.0	36.2	15.94	47.5	27.4	16.45	51.1	12.1	16.75	41.4	36.9	17.59	45.8	27.9	18.14	49.3	12.3	18.48
	26.7	44.8	41.6	15.99	48.3	34.3	16.49	51.1	22.5	16.80	43.2	42.4	17.64	46.6	35.0	18.19	49.3	22.9	18.53
	29.4	46.5	45.6	16.04	49.0	41.3	16.54	50.9	31.1	16.85	44.9	44.9	17.69	47.3	42.1	18.25	49.1	31.7	18.59
	32.2	48.0	48.0	16.09	49.6	45.9	16.59	50.6	37.9	16.90	46.3	46.3	17.74	47.8	46.8	18.30	48.8	38.6	18.64
2336	23.9	45.0	38.6	16.08	49.7	29.2	16.59	53.4	12.9	16.90	43.4	39.4	17.72	47.9	29.8	18.28	51.5	13.2	18.62
	26.7	46.9	44.4	16.13	50.6	36.6	16.64	53.5	24.0	16.95	45.2	45.2	17.78	48.8	37.3	18.34	51.6	24.4	18.68
	29.4	48.7	48.6	16.18	51.3	44.1	16.69	53.3	33.2	17.00	47.0	47.0	17.83	49.5	45.0	18.39	51.4	33.8	18.73
	32.2	50.3	50.3	16.23	51.9	49.0	16.74	53.0	40.4	17.05	48.5	48.5	17.88	50.0	49.9	18.45	51.1	41.2	18.79
2596	23.9	46.1	41.5	16.22	51.0	31.4	16.73	54.9	13.9	17.04	44.5	42.3	17.93	49.2	32.0	18.49	52.9	14.1	18.84
	26.7	48.1	47.6	16.27	51.9	39.3	16.78	54.9	25.8	17.09	46.4	46.4	17.98	50.1	40.1	18.55	52.9	26.3	18.89
	29.4	50.0	50.0	16.32	52.7	47.4	16.83	54.7	35.6	17.14	48.2	48.2	18.04	50.8	48.3	18.61	52.8	36.3	18.95
	32.2	51.6	51.6	16.36	53.3	52.6	16.88	54.4	43.4	17.19	49.8	49.8	18.09	51.4	51.4	18.66	52.5	44.2	19.01
2856	23.9	46.9	43.4	16.36	51.9	32.9	16.87	55.8	14.5	17.18	45.3	44.3	18.00	50.1	33.5	18.57	53.8	14.8	18.91
	26.7	49.0	49.0	16.40	52.8	41.2	16.92	55.8	27.0	17.24	47.2	47.2	18.05	51.0	42.0	18.62	53.8	27.5	18.97
	29.4	50.8	50.8	16.45	53.6	49.6	16.97	55.7	37.3	17.29	49.0	49.0	18.11	51.7	50.5	18.68	53.7	38.0	19.03
	32.2	52.5	52.5	16.50	54.2	54.2	17.02	55.3	45.4	17.34	50.6	50.6	18.16	52.3	52.3	18.73	53.4	46.3	19.08
3115	23.9	47.5	44.8	16.49	52.6	33.9	17.01	56.5	15.0	17.33	45.9	45.6	18.14	50.7	34.6	18.71	54.5	15.3	19.06
	26.7	49.6	49.6	16.54	53.5	42.5	17.07	56.5	27.8	17.38	47.8	47.8	18.19	51.6	43.3	18.77	54.5	28.4	19.11
	29.4	51.5	51.5	16.59	54.3	51.2	17.12	56.4	38.5	17.43	49.7	49.7	18.25	52.4	52.1	18.82	54.4	39.2	19.17
	32.2	53.2	53.2	16.64	54.9	54.9	17.17	56.0	46.9	17.49	51.3	51.3	18.30	52.9	52.9	18.88	54.1	47.8	19.23

Outdoor DB(°C)		40.6									46.1									51.7								
Indoor WB(°C)		16.1			19.4			22.8			16.1			19.4			22.8			16.1			19.4			22.8		
l/s	DB(°C)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
2077	23.9	40.0	36.0	18.92	44.2	27.2	19.51	47.5	12.0	19.87	37.7	35.0	20.01	41.7	26.5	20.65	44.9	11.7	21.03	35.0	33.4	20.94	38.6	25.3	21.60	41.6	11.2	22.00
	26.7	41.7	41.3	18.97	45.0	34.1	19.57	47.6	22.3	19.93	39.4	39.4	20.07	42.5	33.2	20.71	44.9	21.7	21.09	36.5	36.5	21.00	39.3	31.7	21.66	41.6	20.7	22.06
	29.4	43.3	43.3	19.03	45.7	41.1	19.63	47.4	30.9	19.99	40.9	40.9	20.13	43.1	40.0	20.77	44.8	30.1	21.16	37.8	37.8	21.06	39.9	38.1	21.73	41.5	28.7	22.13
	32.2	44.7	44.7	19.09	46.1	45.6	19.69	47.1	37.6	20.05	42.2	42.2	20.20	43.6	43.6	20.83	44.5	36.6	21.22	39.1	39.1	21.13	40.3	40.3	21.79	41.2	34.9	22.20
2336	23.9	41.9	38.4	19.05	46.3	29.0	19.65	49.7	12.8	20.02	39.5	37.3	20.15	43.7	28.3	20.79	46.9	12.5	21.17	36.6	35.6	21.08	40.4	27.0	21.74	43.5	11.9	22.14
	26.7	43.7	43.7	19.11	47.1	36.4	19.71	49.8	23.8	20.08	41.2	41.2	20.21	44.5	35.4	20.85	47.0	23.2	21.24	38.2	38.2	21.14	41.2	33.8	21.81	43.5	22.1	22.21
	29.4	45.3	45.3	19.17	47.8	43.8	19.77	49.6	33.0	20.14	42.8	42.8	20.27	45.1	42.6	20.91	46.8	32.1	21.30	39.6	39.6	21.20	41.8	40.7	21.87	43.4	30.6	22.28
	32.2	46.8	46.8	19.23	48.3	48.3	19.83	49.3	40.1	20.20	44.2	44.2	20.33	45.6	45.6	20.98	46.5	39.1	21.36	40.9	40.9	21.27	42.2	42.2	21.94	43.1	37.3	22.34
2596	23.9	43.0	41.2	19.19	47.5	31.2	19.80	51.1	13.8	20.16	40.5	40.1	20.29	44.8	30.4	20.93	48.2	13.4	21.32	37.6	37.6	21.21	41.5	29.0	21.88	44.6	12.8	22.29
	26.7	44.8	44.8	19.25	48.4	39.1	19.86	51.1	25.6	20.22	42.3	42.3	20.35	45.6	38.0	20.99	48.2	24.9	21.38	39.2	39.2	21.28	42.3	36.3	21.95	44.7	23.8	22.36
	29.4	46.5	46.5	19.31	49.1	47.0	19.92	50.9	35.4	20.29	43.9	43.9	20.41	46.3	45.8	21.06	48.1	34.4	21.45	40.7	40.7	21.34	42.9	42.9	22.01	44.5	32.9	22.42
	32.2	48.0	48.0	19.36	49.6	49.6	19.98	50.6	43.1	20.35	45.3	45.3	20.47	46.8	46.8	21.12	47.8	41.9	21.51	42.0	42.0	21.40	43.3	43.3	22.08	44.3	40.0	22.49
2856	23.9	43.7	43.1	19.33	48.3	32.7	19.94	51.9	14.4	20.31	41.2	41.2	20.43	45.6	31.8	21.07	49.0	14.0	21.46	38.2	38.2	21.35	42.2	30.3	22.02	45.4	13.4	22.43
	26.7	45.6	45.6	19.39	49.2	40.9	20.00	52.0	26.8	20.37	43.0	43.0	20.49	46.4	39.8	21.14	49.0	26.1	21.53	39.9	39.9	21.42	43.0	38.0	22.09	45.4	24.9	22.50
	29.4	47.3	47.3	19.45	49.9	49.3	20.06	51.8	37.0	20.43	44.6	44.6	20.55	47.1	47.1	21.20	48.9	36.1	21.59	41.4	41.4	21.48	43.6	43.6	22.16	45.3	34.4	22.57
	32.2	48.9	48.9	19.50	50.4	50.4	20.12	51.5	45.1	20.49	46.1	46.1	20.61	47.6	47.6	21.26	48.6	43.9	21.66	42.7	42.7	21.54	44.1	44.1	22.22	45.0	41.9	22.64
3115	23.9	44.3	44.3	19.47	48.9	33.7	20.08	52.6	14.9	20.45	41.8	41.8	20.57	46.2	32.8	21.21	49.6	14.5	21.61	38.7	38.7	21.49	42.8	31.3	22.17	46.0	13.8	22.58
	26.7	46.2	46.2	19.53	49.8	42.2	20.14	52.6	27.6	20.52	43.6	43.6	20.63	47.0	41.1	21.28	49.7	26.9	21.67	40.4	40.4	21.55	43.5	39.2	22.23	46.0	25.7	22.65
	29.4	47.9	47.9	19.58	50.5	50.5	20.20	52.5	38.2	20.58	45.2	45.2	20.69	47.7	47.7	21.34	49.5	37.2	21.74	41.9	41.9	21.62	44.2	44.2	22.30	45.9	35.5	22.71
	32.2	49.5	49.5	19.64	51.1	51.1	20.26	52.2	46.5	20.64	46.7	46.7	20.75	48.2	48.2	21.41	49.2	45.3	21.80	43.3	43.3	21.68	44.6	44.6	22.37	45.6	43.2	22.78

Notes:

1. All capacities are gross, evaporator fan motor heat is not deducted. To obtain net cooling capacity, subtract evaporator fan motor heat.
2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)
3. l/s = Liters per second
4. TGC = Total Gross Cooling Capacity(Unit : kW)
5. SHC = Sensible Heat Capacity(Unit : kW)
6. PI = Power Input(kW), Sum of Compressor & Outdoor Fan Power Input

Gross Cooling Capacity (kW) 20 ton AK-H2408C00, EK-H2408C00 (SI)

Outdoor DB(°C)		29.4									35.0								
Indoor WB(°C)		16.1			19.4			22.8			16.1			19.4			22.8		
l/s	DB(°C)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
3021	23.9	59.3	49.3	18.66	65.5	37.3	19.25	70.4	16.5	19.60	57.2	50.3	20.58	63.2	38.1	21.23	67.9	16.8	21.62
	26.7	61.8	56.6	18.71	66.7	46.8	19.30	70.5	30.6	19.66	59.6	57.7	20.64	64.3	47.7	21.29	68.0	31.2	21.69
	29.4	64.2	62.1	18.77	67.7	56.3	19.36	70.3	42.4	19.72	61.9	61.9	20.70	65.3	57.4	21.36	67.8	43.2	21.75
	32.2	66.3	65.4	18.83	68.4	62.6	19.42	69.8	51.6	19.78	63.9	63.9	20.77	66.0	63.8	21.42	67.4	52.6	21.82
3398	23.9	62.0	52.6	18.82	68.6	39.8	19.41	73.7	17.6	19.77	59.8	53.6	20.74	66.1	40.6	21.40	71.1	17.9	21.79
	26.7	64.7	60.4	18.88	69.8	49.9	19.47	73.7	32.7	19.83	62.4	61.6	20.80	67.3	50.9	21.46	71.1	33.3	21.86
	29.4	67.1	66.2	18.93	70.8	60.1	19.53	73.5	45.2	19.89	64.8	64.8	20.87	68.3	61.2	21.53	70.9	46.1	21.92
	32.2	69.3	69.3	18.99	71.6	66.8	19.59	73.1	55.0	19.95	66.9	66.9	20.93	69.0	68.0	21.59	70.5	56.1	21.99
3776	23.9	63.7	56.5	18.98	70.4	42.8	19.58	75.7	18.9	19.94	61.4	57.6	20.98	67.9	43.6	21.64	73.0	19.2	22.05
	26.7	66.4	64.9	19.04	71.6	53.6	19.64	75.7	35.1	20.00	64.1	64.1	21.05	69.1	54.6	21.71	73.0	35.8	22.11
	29.4	68.9	68.9	19.09	72.7	64.5	19.70	75.5	48.5	20.06	66.5	66.5	21.11	70.1	65.8	21.78	72.8	49.5	22.18
	32.2	71.2	71.2	19.15	73.5	71.7	19.76	75.0	59.1	20.12	68.7	68.7	21.17	70.9	70.9	21.84	72.4	60.2	22.25
4154	23.9	64.7	59.2	19.14	71.6	44.8	19.75	77.0	19.8	20.11	62.5	60.3	21.07	69.1	45.7	21.73	74.2	20.2	22.13
	26.7	67.6	67.6	19.20	72.9	56.1	19.81	77.0	36.7	20.17	65.2	65.2	21.13	70.3	57.2	21.80	74.3	37.4	22.20
	29.4	70.1	70.1	19.26	73.9	67.6	19.86	76.8	50.8	20.23	67.6	67.6	21.19	71.3	68.8	21.86	74.1	51.8	22.27
	32.2	72.4	72.4	19.31	74.7	74.7	19.92	76.3	61.9	20.29	69.9	69.9	21.26	72.1	72.1	21.93	73.6	63.1	22.33
4531	23.9	65.6	61.0	19.30	72.5	46.2	19.91	78.0	20.4	20.28	63.3	62.2	21.23	69.9	47.1	21.90	75.2	20.8	22.30
	26.7	68.4	68.4	19.36	73.8	57.9	19.97	78.0	37.9	20.34	66.0	66.0	21.29	71.2	59.0	21.96	75.2	38.6	22.37
	29.4	71.0	71.0	19.42	74.9	69.7	20.03	77.8	52.4	20.40	68.5	68.5	21.35	72.2	71.0	22.03	75.0	53.4	22.44
	32.2	73.3	73.3	19.48	75.7	75.7	20.09	77.3	63.8	20.46	70.7	70.7	21.42	73.0	73.0	22.09	74.6	65.0	22.50

Outdoor DB(°C)		40.6									46.1									51.7								
Indoor WB(°C)		16.1			19.4			22.8			16.1			19.4			22.8			16.1			19.4			22.8		
l/s	DB(°C)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
3021	23.9	55.2	49.0	22.14	61.0	37.1	22.84	65.6	16.4	23.26	52.1	47.7	23.42	57.6	36.1	24.16	61.9	15.9	24.61	48.2	45.5	24.50	53.3	34.4	25.28	57.3	15.2	25.75
	26.7	57.6	56.2	22.20	62.1	46.4	22.90	65.6	30.4	23.33	54.3	54.3	23.49	58.6	45.2	24.24	61.9	29.6	24.69	50.3	50.3	24.58	54.3	43.1	25.35	57.3	28.3	25.82
	29.4	59.7	59.7	22.27	63.0	55.9	22.97	65.4	42.1	23.40	56.4	56.4	23.56	59.4	54.4	24.31	61.7	40.9	24.76	52.2	52.2	24.65	55.1	52.0	25.43	57.2	39.1	25.90
	32.2	61.7	61.7	22.34	63.7	62.1	23.04	65.0	51.2	23.47	58.2	58.2	23.64	60.1	60.1	24.38	61.4	49.9	24.83	53.9	53.9	24.73	55.6	55.6	25.51	56.8	47.6	25.98
3398	23.9	57.7	52.3	22.30	63.8	39.6	23.00	68.6	17.5	23.43	54.5	50.9	23.59	60.2	38.5	24.33	64.8	17.0	24.78	50.5	48.5	24.67	55.8	36.8	25.44	60.0	16.2	25.92
	26.7	60.2	60.0	22.37	65.0	49.6	23.07	68.7	32.5	23.50	56.8	56.8	23.66	61.3	48.2	24.40	64.8	31.6	24.86	52.7	52.7	24.74	56.8	46.0	25.52	60.0	30.1	25.99
	29.4	62.5	62.5	22.43	65.9	59.7	23.14	68.5	44.9	23.57	59.0	59.0	23.73	62.2	58.1	24.48	64.6	43.7	24.93	54.6	54.6	24.81	57.6	55.4	25.60	59.8	41.7	26.07
	32.2	64.6	64.6	22.50	66.6	66.3	23.21	68.0	54.7	23.64	60.9	60.9	23.80	62.9	62.9	24.55	64.2	53.2	25.00	56.4	56.4	24.89	58.2	58.2	25.67	59.5	50.8	26.15
3776	23.9	59.3	56.1	22.46	65.5	42.5	23.17	70.4	18.8	23.60	55.9	54.6	23.75	61.8	41.4	24.50	66.5	18.3	24.95	51.8	51.8	24.83	57.3	39.5	25.61	61.6	17.4	26.09
	26.7	61.8	61.8	22.53	66.7	53.2	23.24	70.5	34.9	23.67	58.4	58.4	23.82	62.9	51.8	24.57	66.5	33.9	25.03	54.1	54.1	24.90	58.3	49.4	25.69	61.6	32.4	26.16
	29.4	64.2	64.2	22.60	67.7	64.1	23.31	70.3	48.2	23.74	60.6	60.6	23.89	63.9	62.4	24.64	66.3	46.9	25.10	56.1	56.1	24.98	59.1	59.1	25.76	61.4	44.8	26.24
	32.2	66.3	66.3	22.66	68.4	68.4	23.38	69.9	58.7	23.81	62.5	62.5	23.96	64.5	64.5	24.72	65.9	57.1	25.18	57.9	57.9	25.05	59.8	59.8	25.84	61.1	54.5	26.32
4154	23.9	60.3	58.7	22.62	66.6	44.5	23.34	71.7	19.6	23.77	56.9	56.9	23.91	62.9	43.3	24.66	67.6	19.1	25.12	52.7	52.7	24.99	58.3	41.3	25.78	62.6	18.2	26.25
	26.7	62.9	62.9	22.69	67.8	55.7	23.41	71.7	36.5	23.84	59.4	59.4	23.98	64.0	54.2	24.74	67.6	35.5	25.20	55.0	55.0	25.06	59.3	51.7	25.85	62.7	33.9	26.33
	29.4	65.3	65.3	22.76	68.8	67.1	23.48	71.5	50.5	23.91	61.6	61.6	24.05	65.0	65.0	24.81	67.5	49.1	25.27	57.1	57.1	25.14	60.2	60.2	25.93	62.5	46.9	26.41
	32.2	67.4	67.4	22.83	69.6	69.6	23.55	71.0	61.5	23.98	63.6	63.6	24.12	65.6	65.6	24.88	67.0	59.8	25.35	58.9	58.9	25.21	60.8	60.8	26.01	62.1	57.1	26.49
4531	23.9	61.1	60.6	22.78	67.5	45.9	23.50	72.6	20.3	23.94	57.6	57.6	24.07	63.7	44.7	24.83	68.5	19.7	25.29	53.4	53.4	25.15	59.0	42.6	25.94	63.4	18.8	26.42
	26.7	63.7	63.7	22.85	68.7	57.5	23.57	72.6	37.6	24.01	60.1	60.1	24.14	64.8	55.9	24.90	68.5	36.6	25.37	55.7	55.7	25.23	60.1	53.4	26.02	63.5	35.0	26.50
	29.4	66.1	66.1	22.92	69.7	69.2	23.64	72.4	52.1	24.08	62.4	62.4	24.21	65.8	65.8	24.98	68.3	50.7	25.44	57.8	57.8	25.30	60.9	60.9	26.10	63.3	48.3	26.58
	32.2	68.3	68.3	22.99	70.5	70.5	23.71	72.0	63.4	24.15	64.4	64.4	24.29	66.5	66.5	25.05	67.9	61.7	25.52	59.7	59.7	25.38	61.6	61.6	26.18	62.9	58.9	26.66

Notes:

1. All capacities are gross, evaporator fan motor heat is not deducted. To obtain net cooling capacity, subtract evaporator fan motor heat.
2. DB = Dry Bulb Temperature (°C), WB = Wet Bulb Temperature (°C)
3. l/s = Liters per second
4. TGC = Total Gross Cooling Capacity(Unit : kW)
5. SHC = Sensible Heat Capacity(Unit : kW)
6. PI = Power Input(kW), Sum of Compressor & Outdoor Fan Power Input

Heating Capacity AK-H1208C00 (SI)

Indoor		Outdoor WB(°C)															
		-10		-5		0		2		4		6		10		15	
AFR(l/s)	DB(°C)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
1397	16	20.8	9.2	24.5	10.0	28.4	10.9	29.8	11.2	31.3	11.6	33.0	11.8	35.7	12.4	39.5	13.3
	18	20.2	9.5	23.8	10.4	27.5	11.3	28.9	11.6	30.3	12.0	32.0	12.2	34.6	12.8	38.2	13.7
	20	19.6	9.8	23.1	10.7	26.7	11.7	28.0	12.0	29.4	12.4	30.8	12.6	33.6	13.2	37.1	14.2
	22	18.9	10.1	22.2	11.0	25.7	12.0	27.0	12.4	28.3	12.8	29.9	13.0	32.4	13.7	35.7	14.6
	24	18.2	10.4	21.5	11.4	24.8	12.4	26.1	12.8	27.3	13.2	28.9	13.4	31.3	14.1	34.5	15.1
1746	16	21.2	8.4	24.9	9.2	28.9	10.0	30.3	10.3	31.8	10.6	33.6	10.8	36.3	11.3	40.1	12.2
	18	20.5	8.7	24.2	9.5	27.9	10.3	29.4	10.6	30.8	11.0	32.5	11.1	35.2	11.7	38.8	12.6
	20	19.9	9.0	23.4	9.8	27.1	10.7	28.5	11.0	29.8	11.3	31.3	11.5	34.1	12.1	37.7	13.0
	22	19.2	9.2	22.6	10.1	26.1	11.0	27.4	11.3	28.8	11.7	30.4	11.9	32.9	12.5	36.3	13.4
	24	18.5	9.5	21.8	10.4	25.2	11.3	26.5	11.7	27.8	12.0	29.4	12.2	31.8	12.9	35.1	13.8
2095	16	21.6	8.0	25.5	8.7	29.4	9.5	30.9	9.8	32.4	10.1	34.2	10.3	37.1	10.8	40.9	11.6
	18	20.9	8.3	24.6	9.0	28.5	9.8	29.9	10.2	31.4	10.5	33.2	10.6	35.9	11.2	39.6	12.0
	20	20.3	8.5	23.9	9.3	27.7	10.2	29.1	10.5	30.4	10.8	32.0	11.0	34.8	11.6	38.4	12.4
	22	19.6	8.8	23.0	9.6	26.7	10.5	28.0	10.8	29.3	11.1	31.0	11.3	33.6	11.9	37.0	12.8
	24	18.9	9.1	22.3	9.9	25.7	10.8	27.0	11.2	28.3	11.5	29.9	11.7	32.4	12.3	35.8	13.2

Heating Capacity AK-H1808C00/EK-H1808C00 (SI)

Indoor		Outdoor WB(°C)															
		-10		-5		0		2		4		6		10		15	
AFR(l/s)	DB(°C)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
2001	16	35.0	13.6	41.3	14.8	47.8	16.1	50.2	16.6	52.6	17.1	55.5	17.4	60.1	18.3	66.4	19.6
	18	33.9	14.0	40.0	15.3	46.3	16.7	48.6	17.2	50.9	17.7	53.8	18.0	58.2	19.0	64.3	20.3
	20	32.9	14.5	38.8	15.8	44.9	17.2	47.1	17.8	49.4	18.3	51.9	18.6	56.5	19.6	62.4	21.0
	22	31.7	14.9	37.4	16.3	43.3	17.8	45.4	18.3	47.6	18.9	50.3	19.2	54.5	20.2	60.1	21.6
	24	30.6	15.4	36.1	16.8	41.8	18.3	43.9	18.9	46.0	19.5	48.6	19.8	52.6	20.8	58.0	22.3
2501	16	35.6	12.4	42.0	13.5	48.5	14.8	51.0	15.2	53.4	15.7	56.4	15.9	61.1	16.8	67.4	18.0
	18	34.5	12.8	40.6	14.0	47.0	15.3	49.4	15.7	51.7	16.2	54.7	16.5	59.2	17.3	65.3	18.6
	20	33.5	13.2	39.4	14.5	45.6	15.8	47.9	16.2	50.2	16.7	52.7	17.0	57.4	17.9	63.4	19.2
	22	32.3	13.7	38.0	14.9	44.0	16.3	46.2	16.8	48.4	17.3	51.1	17.6	55.3	18.5	61.1	19.8
	24	31.1	14.1	36.7	15.4	42.5	16.8	44.6	17.3	46.7	17.8	49.4	18.1	53.4	19.1	59.0	20.4
3001	16	36.3	11.8	42.8	12.9	49.5	14.1	52.0	14.5	54.5	15.0	57.6	15.2	62.3	16.0	68.8	17.1
	18	35.2	12.2	41.5	13.4	48.0	14.6	50.4	15.0	52.8	15.5	55.8	15.7	60.4	16.6	66.6	17.7
	20	34.1	12.6	40.2	13.8	46.5	15.0	48.9	15.5	51.2	16.0	53.8	16.2	58.6	17.1	64.6	18.3
	22	32.9	13.0	38.8	14.2	44.9	15.5	47.1	16.0	49.4	16.5	52.2	16.8	56.5	17.6	62.3	18.9
	24	31.8	13.4	37.4	14.7	43.3	16.0	45.5	16.5	47.7	17.0	50.4	17.3	54.5	18.2	60.2	19.5

Correction Factor for Heating Capacity due to Frost on Heat Exchanger and Defrosting Operation.
The heating capacity in the "Heating Capacity Table" above indicates the actual heating capacity excluding the effect of frost on the heat exchanger and the defrosting operation. Therefore, use the following factor to calculate the average heating capacity including capacity reduction by frost on the exchanger and defrosting operation.

Correction Factor

Outdoor Air Temperature (°CWB, RH=85%)	10	-6	-4	-2	0	2	4	6
Correction Factor	0.95	0.95	0.89	0.87	0.87	0.89	0.91	1.00

Notes:
1. All capacities are net, indoor fan motor heat is deducted.
2. Capacities are based on the following conditions.
   Outdoor air : 85%RH. However, the condition on nominal capacity is 7°CDB/6°CWB.
3. TC=Total heating capacity(Unit : kW)
4. PI=Power Input(Comp.+indoor fan motor+outdoor fan motor) (kW)
5. AFR=Air flow rate(l/s).

Heating Capacity AK-H2408C00/EK-H2408C00 (SI)

Indoor		Outdoor WB(°C)															
		-10		-5		0		2		4		6		10		15	
AFR(l/s)	DB(°C)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
3020	16	48.7	22.1	57.3	24.2	66.3	26.4	69.7	27.2	73.0	28.0	77.1	28.5	83.5	30.0	92.2	32.1
	18	47.1	22.9	55.5	25.0	64.2	27.3	67.5	28.1	70.7	28.9	74.7	29.4	80.9	31.0	89.3	33.2
	20	45.7	23.6	53.9	25.8	62.3	28.2	65.5	29.0	68.6	29.9	72.1	30.4	78.5	32.0	86.6	34.3
	22	44.1	24.4	51.9	26.7	60.1	29.0	63.1	29.9	66.1	30.8	69.9	31.4	75.6	33.0	83.5	35.4
	24	42.6	25.2	50.1	27.5	58.0	29.9	60.9	30.9	63.8	31.8	67.5	32.3	73.0	34.0	80.6	36.5
3775	16	49.5	20.3	58.3	22.1	67.4	24.1	70.8	24.9	74.2	25.6	78.4	26.0	84.9	27.4	93.7	29.4
	18	47.9	20.9	56.4	22.9	65.3	24.9	68.6	25.7	71.8	26.5	75.9	26.9	82.2	28.3	90.7	30.4
	20	46.5	21.6	54.8	23.6	63.3	25.7	66.5	26.5	69.7	27.3	73.2	27.8	79.7	29.3	88.0	31.3
	22	44.8	22.3	52.8	24.4	61.1	26.6	64.1	27.4	67.2	28.2	71.0	28.7	76.9	30.2	84.8	32.3
	24	43.3	23.0	51.0	25.1	59.0	27.4	61.9	28.2	64.9	29.1	68.6	29.6	74.2	31.1	81.9	33.3
4530	16	50.5	19.3	59.5	21.1	68.8	23.0	72.2	23.7	75.7	24.4	80.0	24.8	86.6	26.2	95.6	28.0
	18	48.9	20.0	57.6	21.8	66.6	23.8	70.0	24.5	73.3	25.3	77.5	25.7	83.8	27.0	92.5	29.0
	20	47.4	20.6	55.9	22.6	64.6	24.6	67.9	25.3	71.1	26.1	74.7	26.5	81.3	27.9	89.8	29.9
	22	45.7	21.3	53.8	23.3	62.3	25.4	65.4	26.1	68.6	26.9	72.4	27.4	78.4	28.8	86.5	30.9
	24	44.1	22.0	52.0	24.0	60.2	26.1	63.2	26.9	66.2	27.7	70.0	28.2	75.7	29.7	83.6	31.8

Correction Factor for Heating Capacity due to Frost on Heat Exchanger and Defrosting Operation.
The heating capacity in the "Heating Capacity Table" above indicates the actual heating capacity excluding the effect of frost on the heat exchanger and the defrosting operation. Therefore, use the following factor to calculate the average heating capacity including capacity reduction by frost on the exchanger and defrosting operation.

Correction Factor

Outdoor Air Temperature (°CWB, RH=85%)	10	-6	-4	-2	0	2	4	6
Correction Factor	0.95	0.95	0.89	0.87	0.87	0.89	0.91	1.00

Notes:
1. All capacities are net, indoor fan motor heat is deducted.
2. Capacities are based on the following conditions.
   Outdoor air : 85%RH. However, the condition on nominal capacity is 7°CDB/6°CWB.
3. TC=Total heating capacity(Unit : kW)
4. PI=Power Input(Comp.+indoor fan motor+outdoor fan motor) (kW)
5. AFR=Air flow rate(l/s).

Gross Cooling Capacity (MBH) 10 ton AK-H1208C00 (English)

Outdoor DB(°F)		85									95								
Indoor WB(°F)		61			67			73			61			67			73		
CFM	DB(°F)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
2960	75	106.0	84.5	12.80	117.2	63.5	13.20	126.0	28.3	13.45	98.8	80.8	14.01	109.2	60.8	14.45	117.5	27.1	14.72
	80	110.6	96.8	12.84	119.3	80.1	13.24	126.1	52.2	13.49	103.1	92.6	14.05	111.2	76.6	14.50	117.5	50.0	14.76
	85	114.8	106.1	12.88	121.0	95.8	13.28	125.7	72.4	13.53	107.0	101.5	14.09	112.8	91.7	14.54	117.2	69.3	14.81
	90	118.6	112.1	12.92	122.3	106.9	13.32	125.0	88.6	13.57	110.5	107.3	14.14	114.0	102.3	14.58	116.5	84.8	14.85
3330	75	110.5	93.1	12.91	122.1	70.0	13.32	131.3	31.2	13.57	102.9	89.1	14.13	113.8	67.0	14.58	122.4	29.8	14.85
	80	115.2	106.7	12.95	124.3	88.2	13.36	131.3	57.6	13.61	107.4	102.1	14.18	115.9	84.4	14.63	122.4	55.1	14.89
	85	119.6	117.0	12.99	126.1	105.6	13.40	131.0	79.8	13.65	111.5	111.5	14.22	117.5	101.1	14.67	122.1	76.4	14.94
	90	123.5	123.5	13.03	127.5	117.8	13.44	130.2	97.6	13.69	115.1	115.1	14.26	118.8	112.7	14.71	121.3	93.4	14.98
3700	75	113.8	101.3	13.05	125.8	76.2	13.46	135.2	33.9	13.71	106.0	97.0	14.29	117.2	72.9	14.74	126.0	32.5	15.01
	80	118.7	116.1	13.09	128.1	96.0	13.51	135.3	62.7	13.75	110.6	110.6	14.33	119.4	91.9	14.78	126.1	60.0	15.05
	85	123.2	123.2	13.13	129.9	114.9	13.54	134.9	86.8	13.79	114.8	114.8	14.37	121.1	110.0	14.82	125.8	83.1	15.10
	90	127.2	127.2	13.17	131.3	128.2	13.58	134.1	106.3	13.84	118.6	118.6	14.41	122.4	122.4	14.87	125.0	101.7	15.14
4070	75	115.9	108.5	13.12	128.2	81.6	13.54	137.8	36.3	13.79	108.1	103.8	14.36	119.5	78.1	14.82	128.4	34.7	15.09
	80	121.0	121.0	13.16	130.5	102.8	13.58	137.9	67.1	13.83	112.7	112.7	14.41	121.6	98.4	14.86	128.5	64.2	15.14
	85	125.5	125.5	13.20	132.4	123.0	13.62	137.5	92.9	13.87	117.0	117.0	14.45	123.4	117.7	14.91	128.1	88.9	15.18
	90	129.7	129.7	13.24	133.8	133.8	13.66	136.6	113.7	13.91	120.8	120.8	14.49	124.7	124.7	14.95	127.4	108.8	15.23
4440	75	117.0	114.9	13.20	129.3	86.4	13.61	139.1	38.4	13.86	109.0	109.0	14.44	120.5	82.7	14.90	129.6	36.8	15.18
	80	122.1	122.1	13.24	131.7	108.9	13.65	139.1	71.0	13.91	113.8	113.8	14.49	122.7	104.2	14.95	129.7	68.0	15.22
	85	126.7	126.7	13.28	133.6	130.3	13.69	138.7	98.4	13.95	118.1	118.1	14.53	124.5	124.5	14.99	129.3	94.2	15.27
	90	130.8	130.8	13.32	135.0	135.0	13.74	137.9	120.4	13.99	121.9	121.9	14.57	125.8	125.8	15.03	128.5	115.2	15.31

Outdoor DB(°F)		105									115									125								
Indoor WB(°F)		61			67			73			61			67			73			61			67			73		
CFM	DB(°F)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
2960	75	89.4	76.0	15.38	98.8	57.1	15.86	106.3	25.4	16.16	75.5	69.8	17.05	83.4	52.5	17.59	89.7	23.3	17.91	83.3	81.5	16.68	92.1	61.7	17.21	99.0	27.3	17.53
	80	93.3	87.0	15.42	100.6	72.0	15.91	106.3	47.0	16.21	78.7	78.7	17.10	84.9	66.1	17.64	89.7	43.1	17.97	86.9	86.9	16.73	93.7	77.3	17.26	99.0	50.6	17.58
	85	96.8	95.5	15.47	102.1	86.2	15.96	106.0	65.1	16.25	81.7	81.7	17.15	86.2	79.1	17.69	89.5	59.8	18.02	90.2	90.2	16.78	95.1	93.1	17.31	98.7	70.0	17.64
	90	100.0	100.0	15.52	103.2	96.1	16.01	105.4	79.7	16.30	84.4	84.4	17.20	87.1	87.1	17.75	89.0	73.1	18.07	93.1	93.1	16.84	96.1	96.1	17.37	98.1	85.3	17.69
3330	75	93.1	83.8	15.52	103.0	63.0	16.00	110.7	28.0	16.30	78.6	76.9	17.20	86.9	57.8	17.74	93.5	25.7	18.07	87.1	87.0	16.79	96.3	65.9	17.32	103.6	29.1	17.65
	80	97.2	95.9	15.56	104.8	79.4	16.05	110.8	51.8	16.35	82.0	82.0	17.25	88.5	72.9	17.80	93.5	47.5	18.13	90.9	90.9	16.84	98.1	82.5	17.38	103.6	54.0	17.70
	85	100.8	100.8	15.61	106.3	95.0	16.10	110.4	71.8	16.40	85.1	85.1	17.30	89.8	87.2	17.85	93.2	65.9	18.18	94.4	94.4	16.90	99.5	99.3	17.43	103.3	74.7	17.75
	90	104.2	104.2	15.66	107.5	106.0	16.15	109.8	87.8	16.45	87.9	87.9	17.36	90.7	90.7	17.90	92.7	80.6	18.23	97.4	97.4	16.95	100.6	100.6	17.48	102.7	91.0	17.80
3700	75	95.9	91.2	15.68	106.1	68.6	16.18	114.0	30.5	16.48	81.0	81.0	17.38	89.5	62.9	17.93	96.3	28.0	18.27	89.5	89.5	16.90	98.9	70.7	17.44	106.3	31.2	17.76
	80	100.1	100.1	15.73	108.0	86.4	16.23	114.1	56.4	16.52	84.5	84.5	17.44	91.2	79.3	17.99	96.3	51.7	18.32	93.3	93.3	16.96	100.7	88.6	17.49	106.4	58.0	17.81
	85	103.9	103.9	15.78	109.5	103.4	16.27	113.8	78.1	16.57	87.7	87.7	17.49	92.5	92.5	18.04	96.0	71.7	18.38	96.9	96.9	17.01	102.1	102.1	17.54	106.1	80.2	17.87
	90	107.3	107.3	15.82	110.7	110.7	16.32	113.1	95.6	16.62	90.6	90.6	17.54	93.5	93.5	18.09	95.5	87.7	18.43	100.0	100.0	17.06	103.2	103.2	17.59	105.4	97.7	17.92
4070	75	97.8	97.6	15.77	108.1	73.4	16.26	116.2	32.7	16.57	82.5	82.5	17.48	91.2	67.4	18.03	98.1	30.0	18.37	91.0	91.0	17.01	100.6	74.1	17.55	108.1	32.7	17.88
	80	102.0	102.0	15.81	110.0	92.5	16.32	116.3	60.3	16.62	86.1	86.1	17.53	92.9	84.9	18.09	98.1	55.4	18.42	94.9	94.9	17.07	102.4	92.7	17.60	108.2	60.7	17.93
	85	105.9	105.9	15.86	111.6	110.7	16.36	115.9	83.6	16.67	89.4	89.4	17.59	94.2	94.2	18.14	97.9	76.7	18.48	98.5	98.5	17.12	103.9	103.9	17.66	107.9	84.0	17.98
	90	109.3	109.3	15.91	112.8	112.8	16.41	115.2	102.3	16.72	92.3	92.3	17.64	95.2	95.2	18.19	97.3	93.9	18.53	101.7	101.7	17.17	105.0	105.0	17.71	107.2	102.3	18.04
4440	75	98.7	98.7	15.85	109.1	77.7	16.35	117.3	34.6	16.66	83.3	83.3	17.58	92.1	71.3	18.13	99.0	31.7	18.47	92.2	92.2	17.12	101.9	76.4	17.66	109.5	33.7	17.99
	80	102.9	102.9	15.90	111.0	97.9	16.41	117.3	63.9	16.71	86.9	86.9	17.63	93.7	89.9	18.19	99.0	58.6	18.52	96.1	96.1	17.18	103.7	95.7	17.72	109.6	62.7	18.05
	85	106.8	106.8	15.95	112.6	112.6	16.45	117.0	88.5	16.76	90.2	90.2	17.68	95.1	95.1	18.24	98.8	81.3	18.58	99.8	99.8	17.23	105.2	105.2	17.77	109.3	86.7	18.10
	90	110.3	110.3	16.00	113.8	113.8	16.50	116.3	108.3	16.81	93.1	93.1	17.74	96.1	96.1	18.30	98.2	98.2	18.63	103.1	103.1	17.28	106.3	106.3	17.82	108.6	105.5	18.15

Notes:

1. All capacities are gross, evaporator fan motor heat is not deducted. To obtain net cooling capacity, subtract evaporator fan motor heat.
2. DB = Dry Bulb Temperature (°F), WB = Wet Bulb Temperature (°F)
3. CFM = Cubic Feet per minute
4. TGC = Total Gross Cooling Capacity(Unit : MBH = kBtu/h)
5. SHC = Sensible Heat Capacity(Unit : MBH = kBtu/h)
6. PI = Power Input(kW), Sum of Compressor & Outdoor Fan Power Input

Gross Cooling Capacity (MBH) AK-H1808C00, EK-H1808C00 (English)

Outdoor DB(°F)		85									95								
Indoor WB(°F)		61			67			73			61			67			73		
CFM	DB(°F)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
4400	75.0	146.6	123.5	15.94	162.1	93.6	16.45	174.3	41.3	16.75	141.4	125.9	17.59	156.4	95.4	18.14	168.1	42.1	18.48
	80.0	153.0	141.9	15.99	165.0	117.2	16.49	174.3	76.7	16.80	147.6	144.6	17.64	159.2	119.4	18.19	168.2	78.2	18.53
	85.0	158.7	155.5	16.04	167.4	141.1	16.54	173.8	106.1	16.85	153.1	153.1	17.69	161.5	143.8	18.25	167.7	108.2	18.59
	90.0	163.9	163.7	16.09	169.2	156.8	16.59	172.8	129.2	16.90	158.2	158.2	17.74	163.2	159.8	18.30	166.7	131.7	18.64
4950	75.0	153.4	131.8	16.08	169.6	99.8	16.59	182.4	44.1	16.90	148.0	134.3	17.72	163.6	101.7	18.28	175.9	44.9	18.62
	80.0	160.1	151.4	16.13	172.7	125.0	16.64	182.4	81.9	16.95	154.4	154.3	17.78	166.6	127.4	18.34	176.0	83.4	18.68
	85.0	166.1	165.9	16.18	175.2	150.6	16.69	181.9	113.2	17.00	160.3	160.3	17.83	169.0	153.4	18.39	175.5	115.4	18.73
	90.0	171.6	171.6	16.23	177.0	167.3	16.74	180.8	137.9	17.05	165.5	165.5	17.88	170.8	170.5	18.45	174.4	140.5	18.79
5500	75.0	157.5	141.5	16.22	174.1	107.2	16.73	187.2	47.3	17.04	151.9	144.3	17.93	168.0	109.2	18.49	180.6	48.2	18.84
	80.0	164.3	162.5	16.27	177.3	134.2	16.78	187.3	87.9	17.09	158.5	158.5	17.98	171.0	136.8	18.55	180.7	89.6	18.89
	85.0	170.5	170.5	16.32	179.8	161.7	16.83	186.8	121.6	17.14	164.5	164.5	18.04	173.5	164.8	18.61	180.2	123.9	18.95
	90.0	176.1	176.1	16.36	181.7	179.6	16.88	185.6	148.1	17.19	169.9	169.9	18.09	175.3	175.3	18.66	179.1	150.9	19.01
6050	75.0	160.2	148.2	16.36	177.1	112.2	16.87	190.4	49.5	17.18	154.5	151.0	18.00	170.9	114.4	18.57	183.7	50.5	18.91
	80.0	167.1	167.1	16.40	180.3	140.5	16.92	190.5	92.0	17.24	161.2	161.2	18.05	173.9	143.2	18.62	183.8	93.8	18.97
	85.0	173.4	173.4	16.45	182.9	169.3	16.97	190.0	127.3	17.29	167.3	167.3	18.11	176.4	172.5	18.68	183.3	129.7	19.03
	90.0	179.1	179.1	16.50	184.9	184.9	17.02	188.8	155.0	17.34	172.8	172.8	18.16	178.3	178.3	18.73	182.1	158.0	19.08
6600	75.0	162.2	152.9	16.49	179.4	115.8	17.01	192.8	51.1	17.33	156.5	155.8	18.14	173.0	118.0	18.71	186.0	52.1	19.06
	80.0	169.3	169.3	16.54	182.6	145.0	17.07	192.9	94.9	17.38	163.3	163.3	18.19	176.2	147.7	18.77	186.1	96.8	19.11
	85.0	175.7	175.7	16.59	185.2	174.6	17.12	192.4	131.3	17.43	169.5	169.5	18.25	178.7	177.9	18.82	185.6	133.8	19.17
	90.0	181.4	181.4	16.64	187.2	187.2	17.17	191.2	159.9	17.49	175.0	175.0	18.30	180.6	180.6	18.88	184.5	163.0	19.23

Outdoor DB(°F)		105									115									125								
Indoor WB(°F)		61			67			73			61			67			73			61			67			73		
CFM	DB(°F)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
4400	75.0	136.5	122.7	18.92	150.9	92.9	19.51	162.2	41.0	19.87	128.8	119.4	20.01	142.4	90.4	20.65	153.1	39.9	21.03	119.3	114.0	20.94	131.9	86.3	21.60	141.8	38.1	22.00
	80.0	142.4	140.9	18.97	153.6	116.4	19.57	162.3	76.2	19.93	134.4	134.4	20.07	145.0	113.2	20.71	153.2	74.2	21.09	124.5	124.5	21.00	134.3	108.1	21.66	141.9	70.8	22.06
	85.0	147.8	147.8	19.03	155.8	140.1	19.63	161.9	105.4	19.99	139.5	139.5	20.13	147.1	136.4	20.77	152.7	102.6	21.16	129.2	129.2	21.06	136.2	130.2	21.73	141.5	97.9	22.13
	90.0	152.6	152.6	19.09	157.5	155.7	19.69	160.9	128.4	20.05	144.0	144.0	20.20	148.6	148.6	20.83	151.8	124.9	21.22	133.4	133.4	21.13	137.7	137.7	21.79	140.6	119.2	22.20
4950	75.0	142.8	130.9	19.05	157.9	99.1	19.65	169.8	43.8	20.02	134.8	127.4	20.15	149.0	96.5	20.79	160.2	42.6	21.17	124.9	121.6	21.08	138.0	92.1	21.74	148.4	40.6	22.14
	80.0	149.0	149.0	19.11	160.8	124.2	19.71	169.9	81.3	20.08	140.6	140.6	20.21	151.7	120.8	20.85	160.3	79.1	21.24	130.3	130.3	21.14	140.5	115.3	21.81	148.5	75.5	22.21
	85.0	154.7	154.7	19.17	163.1	149.5	19.77	169.4	112.5	20.14	145.9	145.9	20.27	153.9	145.5	20.91	159.8	109.4	21.30	135.2	135.2	21.20	142.6	138.9	21.87	148.1	104.5	22.28
	90.0	159.7	159.7	19.23	164.8	164.8	19.83	168.4	137.0	20.20	150.7	150.7	20.33	155.6	155.6	20.98	158.9	133.3	21.36	139.6	139.6	21.27	144.1	144.1	21.94	147.2	127.2	22.34
5500	75.0	146.6	140.6	19.19	162.1	106.5	19.80	174.3	47.0	20.16	138.4	136.8	20.29	153.0	103.6	20.93	164.5	45.7	21.32	128.2	128.2	21.21	141.7	98.9	21.88	152.3	43.6	22.29
	80.0	153.0	153.0	19.25	165.0	133.3	19.86	174.4	87.3	20.22	144.4	144.4	20.35	155.7	129.7	20.99	164.6	85.0	21.38	133.7	133.7	21.28	144.3	123.8	21.95	152.4	81.1	22.36
	85.0	158.8	158.8	19.31	167.4	160.6	19.92	173.9	120.8	20.29	149.8	149.8	20.41	158.0	156.3	21.06	164.1	117.5	21.45	138.8	138.8	21.34	146.3	146.3	22.01	152.0	112.2	22.42
	90.0	164.0	164.0	19.36	169.2	169.2	19.98	172.8	147.1	20.35	154.7	154.7	20.47	159.7	159.7	21.12	163.1	143.1	21.51	143.3	143.3	21.40	147.9	147.9	22.08	151.1	136.6	22.49
6050	75.0	149.1	147.2	19.33	164.9	111.5	19.94	177.3	49.2	20.31	140.7	140.7	20.43	155.6	108.5	21.07	167.3	47.9	21.46	130.4	130.4	21.35	144.1	103.5	22.02	155.0	45.7	22.43
	80.0	155.6	155.6	19.39	167.8	139.6	20.00	177.4	91.4	20.37	146.8	146.8	20.49	158.4	135.8	21.14	167.4	89.0	21.53	136.0	136.0	21.42	146.7	129.6	22.09	155.0	84.9	22.50
	85.0	161.5	161.5	19.45	170.3	168.1	20.06	176.9	126.4	20.43	152.4	152.4	20.55	160.7	160.7	21.20	166.9	123.0	21.59	141.1	141.1	21.48	148.8	148.8	22.16	154.6	117.4	22.57
	90.0	166.8	166.8	19.50	172.1	172.1	20.12	175.8	154.0	20.49	157.4	157.4	20.61	162.4	162.4	21.26	165.9	149.8	21.66	145.8	145.8	21.54	150.4	150.4	22.22	153.6	143.0	22.64
6600	75.0	151.1	151.1	19.47	167.0	115.0	20.08	179.5	50.7	20.45	142.6	142.6	20.57	157.6	111.9	21.21	169.4	49.4	21.61	132.0	132.0	21.49	146.0	106.8	22.17	156.9	47.1	22.58
	80.0	157.6	157.6	19.53	170.0	144.0	20.14	179.6	94.3	20.52	148.7	148.7	20.63	160.4	140.1	21.28	169.5	91.8	21.67	137.8	137.8	21.55	148.6	133.7	22.23	157.0	87.6	22.65
	85.0	163.6	163.6	19.58	172.5	172.5	20.20	179.1	130.4	20.58	154.3	154.3	20.69	162.8	162.8	21.34	169.0	126.9	21.74	143.0	143.0	21.62	150.7	150.7	22.30	156.6	121.1	22.71
	90.0	168.9	168.9	19.64	174.3	174.3	20.26	178.0	158.8	20.64	159.4	159.4	20.75	164.5	164.5	21.41	168.0	154.6	21.80	147.6	147.6	21.68	152.4	152.4	22.37	155.6	147.5	22.78

Notes:

1. All capacities are gross, evaporator fan motor heat is not deducted. To obtain net cooling capacity, subtract evaporator fan motor heat.
2. DB = Dry Bulb Temperature (°F), WB = Wet Bulb Temperature (°F)
3. CFM = Cubic Feet per minute
4. TGC = Total Gross Cooling Capacity(Unit : MBH = kBtu/h)
5. SHC = Sensible Heat Capacity(Unit : MBH = kBtu/h)
6. PI = Power Input(kW), Sum of Compressor & Outdoor Fan Power Input

Gross Cooling Capacity (MBH) AK-H2408C00, EK-H2408C00 (English)

Outdoor DB(°F)		85									95								
Indoor WB(°F)		61			67			73			61			67			73		
CFM	DB(°F)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
6400	75.0	202.2	168.3	18.66	223.6	127.5	19.25	240.4	56.3	19.60	195.1	171.5	20.58	215.7	129.9	21.23	231.9	57.3	21.62
	80.0	211.0	193.3	18.71	227.6	159.6	19.30	240.5	104.5	19.66	203.6	197.0	20.64	219.6	162.7	21.29	232.0	106.5	21.69
	85.0	219.0	211.8	18.77	230.9	192.2	19.36	239.8	144.6	19.72	211.2	211.2	20.70	222.8	195.9	21.36	231.4	147.3	21.75
	90.0	226.2	223.1	18.83	233.4	213.6	19.42	238.4	176.1	19.78	218.2	218.2	20.77	225.1	217.6	21.42	230.0	179.4	21.82
7200	75.0	211.7	179.6	18.82	234.0	136.0	19.41	251.6	60.0	19.77	204.2	183.0	20.74	225.7	138.6	21.40	242.7	61.2	21.79
	80.0	220.8	206.2	18.88	238.2	170.3	19.47	251.7	111.5	19.83	213.0	210.2	20.80	229.8	173.6	21.46	242.8	113.7	21.86
	85.0	229.2	226.0	18.93	241.6	205.1	19.53	251.0	154.3	19.89	221.1	221.1	20.87	233.1	209.0	21.53	242.1	157.2	21.92
	90.0	236.7	236.7	18.99	244.2	227.9	19.59	249.5	187.9	19.95	228.3	228.3	20.93	235.6	232.2	21.59	240.7	191.4	21.99
8000	75.0	217.3	192.8	18.98	240.2	146.0	19.58	258.3	64.5	19.94	209.6	196.5	20.98	231.7	148.8	21.64	249.1	65.7	22.05
	80.0	226.7	221.4	19.04	244.5	182.9	19.64	258.4	119.8	20.00	218.7	218.7	21.05	235.9	186.4	21.71	249.3	122.1	22.11
	85.0	235.2	235.2	19.09	248.1	220.2	19.70	257.6	165.6	20.06	226.9	226.9	21.11	239.3	224.4	21.78	248.6	168.8	22.18
	90.0	243.0	243.0	19.15	250.7	244.7	19.76	256.1	201.7	20.12	234.4	234.4	21.17	241.9	241.9	21.84	247.0	205.6	22.25
8800	75.0	221.0	201.9	19.14	244.3	152.9	19.75	262.7	67.5	20.11	213.2	205.7	21.07	235.7	155.8	21.73	253.4	68.8	22.13
	80.0	230.6	230.6	19.20	248.7	191.5	19.81	262.8	125.4	20.17	222.4	222.4	21.13	239.9	195.1	21.80	253.5	127.8	22.20
	85.0	239.3	239.3	19.26	252.3	230.6	19.86	262.0	173.4	20.23	230.8	230.8	21.19	243.4	235.0	21.86	252.8	176.7	22.27
	90.0	247.1	247.1	19.31	255.0	255.0	19.92	260.5	211.2	20.29	238.4	238.4	21.26	246.0	246.0	21.93	251.3	215.2	22.33
9600	75.0	223.8	208.2	19.30	247.5	157.7	19.91	266.0	69.6	20.28	215.9	212.2	21.23	238.7	160.7	21.90	256.7	70.9	22.30
	80.0	233.5	233.5	19.36	251.9	197.5	19.97	266.2	129.3	20.34	225.3	225.3	21.29	243.0	201.3	21.96	256.8	131.8	22.37
	85.0	242.3	242.3	19.42	255.5	237.8	20.03	265.4	178.9	20.40	233.8	233.8	21.35	246.5	242.4	22.03	256.1	182.3	22.44
	90.0	250.3	250.3	19.48	258.3	258.3	20.09	263.8	217.9	20.46	241.5	241.5	21.42	249.2	249.2	22.09	254.5	222.0	22.50

Outdoor DB(°F)		105									115									125								
Indoor WB(°F)		61			67			73			61			67			73			61			67			73		
CFM	DB(°F)	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI	TGC	SHC	PI
6400	75.0	188.3	167.2	22.14	208.2	126.6	22.84	223.8	55.9	23.26	177.7	162.7	23.42	196.5	123.2	24.16	211.2	54.4	24.61	164.6	155.2	24.50	182.0	117.6	25.28	195.6	51.9	25.75
	80.0	196.4	192.0	22.20	211.9	158.5	22.90	223.9	103.8	23.33	185.4	185.4	23.49	200.0	154.3	24.24	211.3	101.0	24.69	171.7	171.7	24.58	185.2	147.2	25.35	195.7	96.4	25.82
	85.0	203.9	203.9	22.27	215.0	190.9	22.97	223.3	143.6	23.40	192.4	192.4	23.56	202.9	185.8	24.31	210.7	139.7	24.76	178.2	178.2	24.65	187.9	177.3	25.43	195.2	133.4	25.90
	90.0	210.6	210.6	22.34	217.3	212.1	23.04	221.9	174.9	23.47	198.7	198.7	23.64	205.1	205.1	24.38	209.4	170.2	24.83	184.0	184.0	24.73	189.9	189.9	25.51	194.0	162.4	25.98
7200	75.0	197.1	178.3	22.30	217.9	135.1	23.00	234.2	59.6	23.43	186.0	173.6	23.59	205.6	131.4	24.33	221.0	58.0	24.78	172.2	165.6	24.67	190.4	125.4	25.44	204.7	55.4	25.92
	80.0	205.6	204.8	22.37	221.8	169.1	23.07	234.3	110.8	23.50	194.0	194.0	23.66	209.3	164.6	24.40	221.1	107.8	24.86	179.7	179.7	24.74	193.9	157.1	25.52	204.8	102.9	25.99
	85.0	213.4	213.4	22.43	225.0	203.7	23.14	233.7	153.2	23.57	201.3	201.3	23.73	212.3	198.2	24.48	220.5	149.1	24.93	186.5	186.5	24.81	196.7	189.2	25.60	204.3	142.3	26.07
	90.0	220.4	220.4	22.50	227.4	226.3	23.21	232.2	186.6	23.64	207.9	207.9	23.80	214.6	214.6	24.55	219.2	181.6	25.00	192.6	192.6	24.89	198.8	198.8	25.67	203.0	173.3	26.15
8000	75.0	202.3	191.5	22.46	223.6	145.0	23.17	240.4	64.0	23.60	190.9	186.4	23.75	211.1	141.1	24.50	226.9	62.3	24.95	176.8	176.8	24.83	195.5	134.7	25.61	210.2	59.5	26.09
	80.0	211.0	211.0	22.53	227.7	181.6	23.24	240.5	118.9	23.67	199.2	199.2	23.82	214.8	176.7	24.57	227.0	115.8	25.03	184.5	184.5	24.90	199.0	168.7	25.69	210.3	110.5	26.16
	85.0	219.0	219.0	22.60	231.0	218.7	23.31	239.9	164.5	23.74	206.7	206.7	23.89	217.9	212.9	24.64	226.4	160.1	25.10	191.4	191.4	24.98	201.9	201.9	25.76	209.7	152.8	26.24
	90.0	226.2	226.2	22.66	233.4	233.4	23.38	238.4	200.3	23.81	213.5	213.5	23.96	220.3	220.3	24.72	225.0	195.0	25.18	197.7	197.7	25.05	204.0	204.0	25.84	208.4	186.1	26.32
8800	75.0	205.7	200.5	22.62	227.5	151.8	23.34	244.5	67.0	23.77	194.2	194.2	23.91	214.7	147.8	24.66	230.8	65.2	25.12	179.8	179.8	24.99	198.8	141.0	25.78	213.8	62.2	26.25
	80.0	214.7	214.7	22.69	231.6	190.1	23.41	244.7	124.5	23.84	202.6	202.6	23.98	218.5	185.0	24.74	230.9	121.2	25.20	187.6	187.6	25.06	202.4	176.6	25.85	213.9	115.7	26.33
	85.0	222.8	222.8	22.76	234.9	229.0	23.48	244.0	172.2	23.91	210.2	210.2	24.05	221.7	221.7	24.81	230.2	167.6	25.27	194.7	194.7	25.14	205.3	205.3	25.93	213.3	160.0	26.41
	90.0	230.1	230.1	22.83	237.4	237.4	23.55	242.5	209.7	23.98	217.1	217.1	24.12	224.1	224.1	24.88	228.8	204.1	25.35	201.1	201.1	25.21	207.5	207.5	26.01	212.0	194.8	26.49
9600	75.0	208.4	206.8	22.78	230.4	156.6	23.50	247.7	69.1	23.94	196.7	196.7	24.07	217.4	152.4	24.83	233.7	67.3	25.29	182.2	182.2	25.15	201.4	145.5	25.94	216.5	64.2	26.42
	80.0	217.4	217.4	22.85	234.5	196.1	23.57	247.8	128.5	24.01	205.2	205.2	24.14	221.3	190.9	24.90	233.9	125.0	25.37	190.0	190.0	25.23	205.0	182.2	26.02	216.6	119.3	26.50
	85.0	225.6	225.6	22.92	237.9	236.2	23.64	247.1	177.7	24.08	212.9	212.9	24.21	224.5	224.5	24.98	233.2	172.9	25.44	197.2	197.2	25.30	208.0	208.0	26.10	216.0	165.0	26.58
	90.0	233.0	233.0	22.99	240.5	240.5	23.71	245.6	216.4	24.15	219.9	219.9	24.29	226.9	226.9	25.05	231.8	210.6	25.52	203.7	203.7	25.38	210.2	210.2	26.18	214.7	200.9	26.66

Notes:
1. All capacities are gross, evaporator fan motor heat is not deducted. To obtain net cooling capacity, subtract evaporator fan motor heat.
2. DB = Dry Bulb Temperature (°F), WB = Wet Bulb Temperature (°F)
3. CFM = Cubic Feet per minute
4. TGC = Total Gross Cooling Capacity(Unit : MBH = kBtu/h)
5. SHC = Sensible Heat Capacity(Unit : MBH = kBtu/h)
6. PI = Power Input(kW), Sum of Compressor & Outdoor Fan Power Input

Heating Capacity AK-H1208C00 (English)

Indoor		Outdoor WB(°F)															
		14.0		23.0		32.0		35.6		39.2		42.8		50.0		59.0	
AFR(CFM)	DB(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
2960	60.8	71.1	9.2	83.8	10.0	97.0	10.9	101.8	11.2	106.7	11.6	112.7	11.8	122.0	12.4	134.7	13.3
	64.4	68.9	9.5	81.2	10.4	93.9	11.3	98.6	11.6	103.3	12.0	109.2	12.2	118.2	12.8	130.4	13.7
	68.0	66.8	9.8	78.7	10.7	91.1	11.7	95.7	12.0	100.2	12.4	105.3	12.6	114.7	13.2	126.6	14.2
	71.6	64.4	10.1	75.9	11.0	87.8	12.0	92.2	12.4	96.6	12.8	102.1	13.0	110.5	13.7	122.0	14.6
	75.2	62.2	10.4	73.3	11.4	84.8	12.4	89.0	12.8	93.3	13.2	98.6	13.4	106.7	14.1	117.8	15.1
3700	60.8	72.3	8.4	85.2	9.2	98.5	10.0	103.5	10.3	108.4	10.6	114.6	10.8	124.0	11.3	136.9	12.2
	64.4	70.0	8.7	82.5	9.5	95.4	10.3	100.2	10.6	105.0	11.0	111.0	11.1	120.1	11.7	132.6	12.6
	68.0	67.9	9.0	80.0	9.8	92.6	10.7	97.2	11.0	101.9	11.3	107.0	11.5	116.5	12.1	128.6	13.0
	71.6	65.5	9.2	77.1	10.1	89.2	11.0	93.7	11.3	98.2	11.7	103.8	11.9	112.3	12.5	124.0	13.4
	75.2	63.2	9.5	74.5	10.4	86.2	11.3	90.5	11.7	94.8	12.0	100.2	12.2	108.5	12.9	119.7	13.8
4440	60.8	73.8	8.0	86.9	8.7	100.5	9.5	105.6	9.8	110.6	10.1	116.9	10.3	126.5	10.8	139.7	11.6
	64.4	71.4	8.3	84.1	9.0	97.3	9.8	102.2	10.2	107.1	10.5	113.2	10.6	122.5	11.2	135.2	12.0
	68.0	69.3	8.5	81.6	9.3	94.4	10.2	99.2	10.5	103.9	10.8	109.2	11.0	118.9	11.6	131.2	12.4
	71.6	66.8	8.8	78.7	9.6	91.0	10.5	95.6	10.8	100.2	11.1	105.9	11.3	114.6	11.9	126.5	12.8
	75.2	64.5	9.1	76.0	9.9	87.9	10.8	92.3	11.2	96.7	11.5	102.2	11.7	110.7	12.3	122.1	13.2

Heating Capacity AK-H1808C00/EK-H1808C00 (English)

Indoor		Outdoor WB(°F)															
		14.0		23.0		32.0		35.6		39.2		42.8		50.0		59.0	
AFR(CFM)	DB(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
4240	61	119.7	13.6	141.0	14.8	163.1	16.1	171.3	16.6	179.5	17.1	189.6	17.4	205.3	18.3	226.6	19.6
	64	115.9	14.0	136.5	15.3	157.9	16.7	165.9	17.2	173.8	17.7	183.6	18.0	198.8	19.0	219.4	20.3
	68	112.4	14.5	132.4	15.8	153.2	17.2	160.9	17.8	168.6	18.3	177.1	18.6	192.9	19.6	212.9	21.0
	72	108.4	14.9	127.6	16.3	147.7	17.8	155.1	18.3	162.5	18.9	171.7	19.2	185.9	20.2	205.2	21.6
	75	104.6	15.4	123.3	16.8	142.6	18.3	149.8	18.9	156.9	19.5	165.8	19.8	179.5	20.8	198.1	22.3
5300	61	121.6	12.4	143.3	13.5	165.7	14.8	174.1	15.2	182.4	15.7	192.7	15.9	208.6	16.8	230.3	18.0
	64	117.8	12.8	138.7	14.0	160.5	15.3	168.5	15.7	176.6	16.2	186.6	16.5	202.0	17.3	223.0	18.6
	68	114.2	13.2	134.6	14.5	155.7	15.8	163.5	16.2	171.4	16.7	180.0	17.0	196.0	17.9	216.3	19.2
	72	110.1	13.7	129.7	14.9	150.1	16.3	157.6	16.8	165.2	17.3	174.5	17.6	188.9	18.5	208.5	19.8
	75	106.3	14.1	125.3	15.4	144.9	16.8	152.2	17.3	159.5	17.8	168.5	18.1	182.4	19.1	201.4	20.4
6360	61	124.1	11.8	146.1	12.9	169.1	14.1	177.6	14.5	186.1	15.0	196.6	15.2	212.8	16.0	234.9	17.1
	64	120.1	12.2	141.5	13.4	163.7	14.6	172.0	15.0	180.2	15.5	190.4	15.7	206.1	16.6	227.5	17.7
	68	116.6	12.6	137.3	13.8	158.9	15.0	166.8	15.5	174.8	16.0	183.6	16.2	200.0	17.1	220.7	18.3
	72	112.3	13.0	132.3	14.2	153.1	15.5	160.8	16.0	168.5	16.5	178.1	16.8	192.7	17.6	212.7	18.9
	75	108.5	13.4	127.8	14.7	147.9	16.0	155.3	16.5	162.7	17.0	171.9	17.3	186.1	18.2	205.4	19.5

Correction Factor for Heating Capacity due to Frost on Heat Exchanger and Defrosting Operation.
The heating capacity in the "Heating Capacity Table" above indicates the actual heating capacity excluding the effect of frost on the heat exchanger and the defrosting operation. Therefore, use the following factor to calculate the average heating capacity including capacity reduction by frost on the exchanger and defrosting operation.

Correction Factor

Outdoor Air Temperature (°FWB, RH=85%)	14	21.2	24.8	28.4	32	35.6	39.2	42.8
Correction Factor	0.95	0.95	0.89	0.87	0.87	0.89	0.91	1.00

Notes:
1. All capacities are net, indoor fan motor heat is deducted.
2. Capacities are based on the following conditions.
   Outdoor air : 85%RH. However, the condition on nominal capacity is 7°FDB/6°FWB.
3. TC=Total heating capacity(Unit : kW)
4. PI=Power Input(Comp.+indoor fan motor+outdoor fan motor) (kW)
5. AFR=Air flow rate(CFM).

Heating Capacity AK-H2408C00/EK-H2408C00 (English)

Indoor		Outdoor WB(°F)															
		14.0		23.0		32.0		35.6		39.2		42.8		50.0		59.0	
AFR(CFM)	DB(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
6400	61	166.2	22.1	195.8	24.2	226.5	26.4	237.9	27.2	249.3	28.0	263.4	28.5	285.1	30.0	314.7	32.1
	64	160.9	22.9	189.6	25.0	219.3	27.3	230.4	28.1	241.4	28.9	255.0	29.4	276.1	31.0	304.7	33.2
	68	156.1	23.6	183.9	25.8	212.8	28.2	223.5	29.0	234.2	29.9	246.0	30.4	267.9	32.0	295.7	34.3
	72	150.5	24.4	177.3	26.7	205.1	29.0	215.4	29.9	225.7	30.8	238.5	31.4	258.2	33.0	285.0	35.4
	75	145.3	25.2	171.2	27.5	198.1	29.9	208.0	30.9	218.0	31.8	230.3	32.3	249.3	34.0	275.2	36.5
8000	61	168.9	20.3	199.0	22.1	230.2	24.1	241.8	24.9	253.3	25.6	267.7	26.0	289.7	27.4	319.8	29.4
	64	163.5	20.9	192.7	22.9	222.9	24.9	234.1	25.7	245.3	26.5	259.2	26.9	280.6	28.3	309.7	30.4
	68	158.7	21.6	186.9	23.6	216.3	25.7	227.1	26.5	238.0	27.3	250.0	27.8	272.2	29.3	300.5	31.3
	72	152.9	22.3	180.2	24.4	208.5	26.6	218.9	27.4	229.4	28.2	242.4	28.7	262.4	30.2	289.6	32.3
	75	147.7	23.0	174.0	25.1	201.3	27.4	211.4	28.2	221.5	29.1	234.1	29.6	253.4	31.1	279.7	33.3
9600	61	172.3	19.3	203.0	21.1	234.8	23.0	246.6	23.7	258.4	24.4	273.1	24.8	295.6	26.2	326.3	28.0
	64	166.8	20.0	196.6	21.8	227.4	23.8	238.8	24.5	250.3	25.3	264.4	25.7	286.2	27.0	315.9	29.0
	68	161.9	20.6	190.7	22.6	220.6	24.6	231.7	25.3	242.8	26.1	255.1	26.5	277.7	27.9	306.5	29.9
	72	156.0	21.3	183.8	23.3	212.7	25.4	223.3	26.1	234.0	26.9	247.3	27.4	267.7	28.8	295.5	30.9
	75	150.7	22.0	177.5	24.0	205.4	26.1	215.7	26.9	226.0	27.7	238.8	28.2	258.5	29.7	285.3	31.8

Correction Factor for Heating Capacity due to Frost on Heat Exchanger and Defrosting Operation.
The heating capacity in the "Heating Capacity Table" above indicates the actual heating capacity excluding the effect of frost on the heat exchanger and the defrosting operation. Therefore, use the following factor to calculate the average heating capacity including capacity reduction by frost on the exchanger and defrosting operation.

Correction Factor

Outdoor Air Temperature (°FWB, RH=85%)	14	21.2	24.8	28.4	32	35.6	39.2	42.8
Correction Factor	0.95	0.95	0.89	0.87	0.87	0.89	0.91	1.00

Notes:
1. All capacities are net, indoor fan motor heat is deducted.
2. Capacities are based on the following conditions.
   Outdoor air : 85%RH. However, the condition on nominal capacity is 7°FDB/6°FWB.
3. TC=Total heating capacity(Unit : kW)
4. PI=Power Input(Comp.+indoor fan motor+outdoor fan motor) (kW)
5. AFR=Air flow rate(CFM).

Evaporator Fan Performance Data AK-H1208C00 (SI)

l/s	External Static Pressure(mm Aq.)																							
	2.5		5.1		7.5		10.2		12.7		15.2		17.8		20.3		22.9		25.4		27.9		30.5	
	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW
1397	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	756	0.91	777	0.95	799	0.99	822	1.04
1572	-	-	-	-	-	-	-	-	-	-	746	1.02	763	1.06	782	1.10	802	1.14	823	1.19	845	1.24	868	1.29
1746	-	-	747	1.17	757	1.19	770	1.22	785	1.25	801	1.29	818	1.34	837	1.38	856	1.44	877	1.50	900	1.56	923	1.63
1921	802	1.47	810	1.49	821	1.52	834	1.56	848	1.60	864	1.65	882	1.71	900	1.77	920	1.84	941	1.91	963	2.00	986	2.09
2096	875	1.89	883	1.92	894	1.96	907	2.01	921	2.07	937	2.13	954	2.21	973	2.29	993	2.38	1014	2.47	1036	2.58	1059	2.70

l/s	External Static Pressure(mm Aq.)															
	33.0		35.6		38.1		40.6		43.2		45.7		48.3		50.8	
	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW
1397	846	1.09	871	1.14	897	1.20	924	1.26	951	1.33	980	1.40	1009	1.48	1039	1.57
1572	892	1.35	917	1.42	943	1.49	970	1.57	997	1.66	1026	1.75	1055	1.85	1085	1.96
1746	947	1.71	972	1.79	998	1.88	1024	1.98	1052	2.09	1081	2.21	1110	2.34	1140	2.47
1921	1010	2.18	1035	2.29	1061	2.41	1088	2.53	1116	2.67	1144	2.82	1173	2.99	1204	3.16
2096	1083	2.82	1108	2.96	1134	3.11	1161	3.28	1188	3.45	1217	3.65	1246	3.86	-	-

3Hp STANDARD MOTOR & DRIVE

5Hp OVERSIZED MOTOR & DRIVE

- Fan motor heat (KW) = 1.22 x Fan Bkw
- Test condition : Voltage : 415V
  Operating Mode : Fan operation mode with clean filter, dry coil without electric heater.
- Do not operate the unit at a cooling airflow that is less then 165 l/s / 0.35 KW.
- l/s of cooling capacity test : 1605 l/s at 10.16mmAq.

Evaporator Fan Performance Data AK-H1208C00 (English)

CFM	External Static Pressure(inches of water.)																							
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1		1.1		1.2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	756	1.22	777	1.27	799	1.33	822	1.39
3330	-	-	-	-	-	-	-	-	-	-	746	1.37	763	1.42	782	1.47	802	1.53	823	1.59	845	1.66	868	1.73
3700	-	-	747	1.56	757	1.59	770	1.63	785	1.68	801	1.73	818	1.79	837	1.86	856	1.93	877	2.01	900	2.09	923	2.19
4070	802	1.96	810	2.00	821	2.04	834	2.09	848	2.15	864	2.21	882	2.29	900	2.37	920	2.46	941	2.56	963	2.67	986	2.80
4440	875	2.54	883	2.58	894	2.63	907	2.70	921	2.77	937	2.86	954	2.96	973	3.06	993	3.18	1014	3.31	1036	3.46	1059	3.61

CFM	External Static Pressure(inches of water.)															
	1.3		1.4		1.5		1.6		1.7		1.8		1.9		2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2960	846	1.45	871	1.53	897	1.60	924	1.69	951	1.78	980	1.88	1009	1.99	1039	2.11
3330	892	1.81	917	1.90	943	2.00	970	2.11	997	2.22	1026	2.34	1055	2.48	1085	2.63
3700	947	2.29	972	2.40	998	2.53	1024	2.66	1052	2.80	1081	2.96	1110	3.13	1140	3.32
4070	1010	2.93	1035	3.07	1061	3.23	1088	3.40	1116	3.58	1144	3.78	1173	4.00	1204	4.24
4440	1083	3.78	1108	3.97	1134	4.17	1161	4.39	1188	4.63	1217	4.89	1246	5.17		-

3Hp STANDARD MOTOR & DRIVE

5Hp OVERSIZED MOTOR & DRIVE

- Fan motor heater (MBH) = 3.1 x Fan BHP
- Test Condition : ❶ Voltage : 415V
  ❷ Operating Mode : Fan operation mode with clean filter, dry coil without electric heater.
- Do not operate the unit at a cooling airflow that is less then 350CFM/1.2MBH.
- CFM of cooling capacity test : 3400 CFM at 0.4 in Aq.

Fan speed Data AK-H1208C00(rpm)

	6 Turn Open	5 Turn Open	4 Turn Open	3 Turn Open	2 Turn Open	1 Turn Open	0 Turn Open
Standard Motor & Drive Fan Speed	742	793	843	894	945	996	1046
Oversize Motor & Drive Fan Speed	889	950	1010	1071	1132	1193	1254

- Factory set at 3 turns open.

Evaporator Fan Performance Data AK-H1808C00, EK-H1808C00 (SI)

l/s	External Static Pressure(mm Aq.)																							
	2.54		5.08		7.62		10.16		12.7		15.24		17.78		20.32		22.86		25.4		27.94		30.48	
	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW
2077	565	0.08	591	0.32	618	0.50	644	0.65	671	0.78	697	0.91	724	1.02	750	1.12	777	1.22	803	1.31	830	1.40	856	1.48
2336	597	0.37	624	0.61	650	0.79	677	0.94	703	1.07	730	1.20	756	1.31	783	1.41	809	1.51	836	1.60	862	1.69	889	1.77
2596	636	0.72	662	0.95	689	1.13	715	1.28	742	1.42	768	1.54	795	1.65	821	1.75	848	1.85	874	1.94	901	2.03	927	2.11
2856	680	1.12	707	1.35	733	1.53	760	1.68	786	1.82	813	1.94	839	2.05	866	2.15	892	2.25	919	2.34	945	2.43	972	2.51
3115	731	1.57	758	1.81	784	1.99	811	2.14	837	2.27	864	2.40	890	2.51	917	2.61	943	2.71	970	2.80	996	2.89	1023	2.97

l/s	External Static Pressure(mm Aq.)															
	33.02		35.56		38.1		40.64		43.18		45.72		48.26		50.8	
	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW
2077	883	1.56	909	1.64	936	1.71	962	1.78	989	1.85	1015	1.92	1042	1.99	1068	2.05
2336	915	1.85	942	1.93	968	2.00	995	2.07	1021	2.14	1048	2.21	1074	2.28	1101	2.34
2596	954	2.19	980	2.27	1007	2.35	1033	2.42	1060	2.49	1086	2.56	1112	2.62	1139	2.69
2856	998	2.59	1025	2.67	1051	2.75	1078	2.82	1104	2.89	1131	2.95	1157	3.02	1184	3.08
3115	1049	3.05	1076	3.13	1102	3.20	1129	3.27	1155	3.34	1182	3.41	1208	3.48	1235	3.54

4Hp STANDARD MOTOR & DRIVE
4Hp STANDARD MOTOR & HIGH STATIC DRIVE
5Hp OVERSIZED MOTOR & DRIVE

- Fan motor heat (kW) = 1.22 x Fan BkW
- Test condition : Voltage : 415V
  Operating Mode : Fan operation mode with clean filter, dry coil without electric heater.
- Do not operate the unit at a cooling airflow that is less then 165 l/s / 0.35 kW.
- l/s of cooling capacity test : 2596 l/s at 10.16mmAq.

Evaporator Fan Performance Data AK-H1808C00, EK-H1808C00 (English)

CFM	External Static Pressure(in. Aq.)																							
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1		1.1		1.2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4400	565	0.11	591	0.43	618	0.67	644	0.87	671	1.05	697	1.21	724	1.36	750	1.50	777	1.63	803	1.76	830	1.87	856	1.98
4950	597	0.50	624	0.82	650	1.06	677	1.26	703	1.44	730	1.60	756	1.75	783	1.89	809	2.02	836	2.15	862	2.26	889	2.37
5500	636	0.96	662	1.28	689	1.52	715	1.72	742	1.90	768	2.06	795	2.21	821	2.35	848	2.48	874	2.61	901	2.72	927	2.84
6050	680	1.50	707	1.81	733	2.05	760	2.26	786	2.44	813	2.60	839	2.75	866	2.89	892	3.02	919	3.14	945	3.26	972	3.37
6600	731	2.11	758	2.43	784	2.67	811	2.87	837	3.05	864	3.21	890	3.36	917	3.50	943	3.63	970	3.75	996	3.87	1023	3.98

CFM	External Static Pressure(in. Aq.)															
	1.3		1.4		1.5		1.6		1.7		1.8		1.9		2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4400	883	2.09	909	2.20	936	2.30	962	2.39	989	2.49	1015	2.58	1042	2.66	1068	2.75
4950	915	2.48	942	2.59	968	2.69	995	2.78	1021	2.88	1048	2.97	1074	3.05	1101	3.14
5500	954	2.94	980	3.05	1007	3.15	1033	3.24	1060	3.34	1086	3.43	1112	3.52	1139	3.60
6050	998	3.48	1025	3.58	1051	3.68	1078	3.78	1104	3.87	1131	3.96	1157	4.05	1184	4.14
6600	1049	4.09	1076	4.19	1102	4.29	1129	4.39	1155	4.48	1182	4.58	1208	4.66	1235	4.75

4Hp STANDARD MOTOR & DRIVE
4Hp STANDARD MOTOR & HIGH STATIC DRIVE
5Hp OVERSIZED MOTOR & DRIVE

- Fan motor heat (MBH) = 3.1 x Fan BHP
- Test Condition : ❶ Voltage : 415V
  ❷ Operating Mode : Fan operation mode with clean filter, dry coil without electric heater.
- Do not operate the unit at a cooling airflow that is less then 350CFM/1.2MBH.
- CFM of cooling capacity test : 5500 CFM at 0.4 in Aq.

Fan speed Data AK-H1808C00, EK-H1808C00(rpm)

	6 Turn open	5 Turn open	4 Turn open	3 Turn open	2 Turn open	1 Turn open	0 Turn open
Standard Motor & Drive Fan Speed	623	665	708	751	793	836	879
Standard Motor & High Static Drive	816	872	928	983	1039	1095	1151
Oversize Motor & Drive Fan Speed	907	969	1032	1094	1156	1218	1280

- Factory set at 3 turns open.

Evaporator Fan Performance Data AK-H2408C00, EK-H2408C00 (SI)

l/s	External Static Pressure(mm Aq.)																							
	2.54		5.08		7.62		10.16		12.7		15.24		17.78		20.32		22.86		25.4		27.94		30.48	
	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW
3021	-	-	569	1.35	590	1.46	611	1.56	633	1.67	654	1.77	676	1.88	697	1.98	719	2.09	740	2.20	762	2.30	783	2.41
3398	577	1.60	598	1.71	620	1.81	641	1.92	663	2.03	684	2.13	706	2.24	727	2.34	748	2.45	770	2.55	791	2.66	813	2.76
3776	614	2.05	635	2.15	657	2.26	678	2.37	700	2.47	721	2.58	743	2.68	764	2.79	786	2.89	807	3.00	828	3.10	850	3.21
4154	659	2.59	681	2.70	702	2.81	723	2.91	745	3.02	766	3.12	788	3.23	809	3.33	831	3.44	852	3.54	874	3.65	895	3.75
4531	713	3.25	735	3.35	756	3.46	778	3.56	799	3.67	821	3.77	842	3.88	864	3.99	885	4.09	906	4.20	928	4.30	944	4.41

l/s	External Static Pressure(mm Aq.)															
	33.02		35.56		38.1		40.64		43.18		45.72		48.26		50.8	
	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW	RPM	BkW
3021	805	2.51	826	2.62	848	2.72	869	2.83	891	2.93	912	3.04	933	3.15	955	3.25
3398	834	2.87	856	2.97	877	3.08	899	3.19	920	3.29	942	3.40	963	3.50	985	3.61
3776	871	3.32	893	3.42	914	3.53	936	3.63	957	3.74	979	3.84	1000	3.95	1022	4.05
4154	917	3.86	938	3.97	960	4.07	981	4.18	1002	4.28	1024	4.39	1045	4.49	1067	4.60
4531	971	4.51	992	4.62	1014	4.72	1035	4.83	1057	4.94	1078	5.04	1100	5.15	1121	5.25

5Hp STANDARD MOTOR & DRIVE
5Hp STANDARD MOTOR & HIGH STATIC DRIVE
7.5Hp OVERSIZED MOTOR & DRIVE

- Fan motor heat (kW) = 1.22 x Fan BkW
- Test condition : Voltage : 415V
  Operating Mode : Fan operation mode with clean filter, dry coil without electric heater.
- Do not operate the unit at a cooling airflow that is less then 165 l/s / 0.35 kW.
- l/s of cooling capacity test : 3776 l/s at 8.38mmAq.

Evaporator Fan Performance Data AK-H2408C00, EK-H2408C00 (English)

CFM	External Static Pressure(in. Aq.)																							
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1		1.1		1.2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6400	-	-	569	1.81	590	1.95	611	2.10	633	2.24	654	2.38	676	2.52	697	2.66	719	2.80	740	2.94	762	3.09	783	3.23
7200	577	2.15	598	2.29	620	2.43	641	2.57	663	2.72	684	2.86	706	3.00	727	3.14	748	3.28	770	3.42	791	3.56	813	3.71
8000	614	2.75	635	2.89	657	3.03	678	3.17	700	3.31	721	3.46	743	3.60	764	3.74	786	3.88	807	4.02	828	4.16	850	4.30
8800	659	3.48	681	3.62	702	3.76	723	3.90	745	4.04	766	4.19	788	4.33	809	4.47	831	4.61	852	4.75	874	4.89	895	5.03
9600	713	4.35	735	4.50	756	4.64	778	4.78	799	4.92	821	5.06	842	5.20	864	5.35	885	5.49	906	5.63	928	5.77	944	5.91

CFM	External Static Pressure(in. Aq.)															
	1.3		1.4		1.5		1.6		1.7		1.8		1.9		2	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6400	805	3.37	826	3.51	848	3.65	869	3.79	891	3.93	912	'4.08	933	4.22	955	4.36
7200	834	3.85	856	3.99	877	4.13	899	4.27	920	4.41	942	'4.56	963	4.70	985	4.84
8000	871	4.45	893	4.59	914	4.73	936	4.87	957	5.01	979	'5.15	1000	5.29	1022	5.44
8800	917	5.18	938	5.32	960	5.46	981	5.60	1002	5.74	1024	'5.88	1045	6.03	1067	6.17
9600	971	6.05	992	6.19	1014	6.34	1035	6.48	1057	6.62	1078	'6.76	1100	6.90	1121	7.04

5Hp STANDARD MOTOR & DRIVE
5Hp STANDARD MOTOR & HIGH STATIC DRIVE
7.5Hp OVERSIZED MOTOR & DRIVE

- Fan motor heat (MBH) = 3.1 x Fan BHP
- Test Condition : ❶ Voltage : 415V
  ❷ Operating Mode : Fan operation mode with clean filter, dry coil without electric heater.
- Do not operate the unit at a cooling airflow that is less then 350CFM/1.2MBH.
- CFM of cooling capacity test : 8000 CFM at 0.33 in Aq.

Fan speed Data AK-H2408C00, EK-H2408C00(rpm)

	6 Turn open	5 Turn open	4 Turn open	3 Turn open	2 Turn open	1 Turn open	0 Turn open
Standard Motor & Drive Fan Speed	550	586	623	659	696	733	769
Standard Motor & High Static Drive	739	788	837	886	935	984	1034
Oversize Motor & Drive Fan Speed	893	953	1012	1072	1131	1191	1250

- Factory set at 3 turns open.

Accessory Static Pressure Drops

Unit Model No.	CFM	l/s	Standard Filter		Electric Heater					
					9kW		18kW		36kW	
			in Aq	mm Aq	in. Aq.	mm Aq.	in. Aq.	mm Aq.	in. Aq.	mm Aq.
AK-H1208C00	2960	1397	0.06	1.52	0.01	0.25	0.07	1.78	-	-
	3700	1746	0.10	2.54	0.01	0.25	0.10	2.54	-	-
	4440	2095	0.14	3.56	0.02	0.51	0.15	3.81	-	-
AK-H1808C00 EK-H1808C00	4400	2077	0.06	1.52	-	-	0.04	1.02	0.04	1.02
	5500	2596	0.09	2.29	-	-	0.06	1.52	0.07	1.78
	6600	3115	0.13	3.3	-	-	0.1	2.54	0.11	2.79
AK-H2408C00 EK-H2408C00	6400	3021	0.07	1.78	-	-	-	-	0.07	1.78
	8000	3776	0.10	2.54	-	-	-	-	0.13	3.30
	9600	4531	0.14	3.56	-	-	-	-	0.17	4.32

Electric Heating Capacity

MODEL	Total		No. of Stages	Stage 1		Stage 2	
	Input(kW)	Output(MBH)		Input(kW)	Output(MBH)	Input(kW)	Output(MBH)
AK-H1208C00	9	30.72	1	9	30.72	-	-
	18	61.43	1	18	61.43	-	-
AK-H1808C00	18	61.43	1	18	61.43	-	-
EK-H1808C00	36	122.86	2	18	61.43	18	61.43
AK-H2408C00 EK-H2408C00	36	122.86	2	18	61.43	18	61.43

Note: 1. The output ratings shown above is at 415V.
For other voltage, Output = Capacity Multiplier x Rated Output
2. E/heater Voltage range is 380~415V.

< Correction Coefficient>

Voltage	Capacity Multiplier
380	0.84
400	0.92
415	1.0

Air Temperature Rise Across Electric Heater(°F)

Capacity	Stage	AK-H1208C00 (3,700CFM)	AK-H1808C00, EK-H1808C00 (5,500CFM)	AK-H2408C00, EK-H2408C00 (8,000CFM)
9kW	1	7.69	-	-
18kW	1	15.4	10.3	-
36kW	2	-	20.7	14.2

• Temp. Rise across Electric Heater $= \frac{(kW \times 3413)}{(1.08 \times CFM)}$

• If you want to take temp rise at different airflow use above equation.

11. Electrical data

Electrical Data Unit wiring

Tons	MODEL	Unit Operating Voltage Range	Standard indoor fan motor			Oversized indoor fan motor		
			*M.C.A.	*M.F.S.	*M.C.B.	*M.C.A.	*M.F.S.	*M.C.B.
10	AK-H1208C00	342~456	38.2	40.0	40.0	-	-	-
15	AK-H1808C00 EK-H1808C00	342~456	57.2	80.0	80.0	57.8	80.0	80.0
20	AK-H2408C00 EK-H2408C00	342~456	74.4	100.0	100.0	78.5	100.0	100.0

Note: *M.C.A.: Minimum Circuit Ampacity
*M.F.S.: Maximum Fuse Size
*M.C.B.: Maximum Circuit Breaker

Electrical Data Unit wiring with electric heater + heat pump cycle

MODEL	Electric Heater (kW)	Unit Operating Voltage Range	Standard indoor fan motor			Oversized indoor fan motor		
			*M.C.A.	*M.F.S.	*M.C.B.	*M.C.A.	*M.F.S.	*M.C.B.
AK-H1208C00	9	3Ø, 380-415V, 50Hz	55.3	60.0	60.0	-	-	-
	18		72.4	70.0	70.0	-	-	-
AK-H1808C00 EK-H1808C00	18		91.4	110.0	110.0	92.0	110.0	110.0
	36		125.5	140.0	140.0	126.1	140.0	140.0
AK-H2408C00 EK-H2408C00	36		142.8	150.0	150.0	146.9	150.0	150.0

Note: Heater kW ratings are at 380/415 V unit.

Electrical Characteristics --- Evaporator Fan Motor --- 50 Hz

MODEL	Standard evaporator fan motor						Oversized evaporator fan motor					
	No	Volts	Phase	HP	FLA	LRA	No	Volts	Phase	HP	FLA	LRA
AK-H1208C00	1	380~415	3	3.0	5.0	31.0	-	-	-	-	-	-
AK-H1808C00 EK-H1808C00				4.0	6.5	26.0	1	380~415	3.0	5.0	7.1	42.0
AK-H2408C00 EK-H2408C00				5.0	7.1	42.0	1	380~415	3.0	7.5	11.2	63.0

Note: • FLA-Full Load Amps.
• LRA-Locked Rotor Amps.

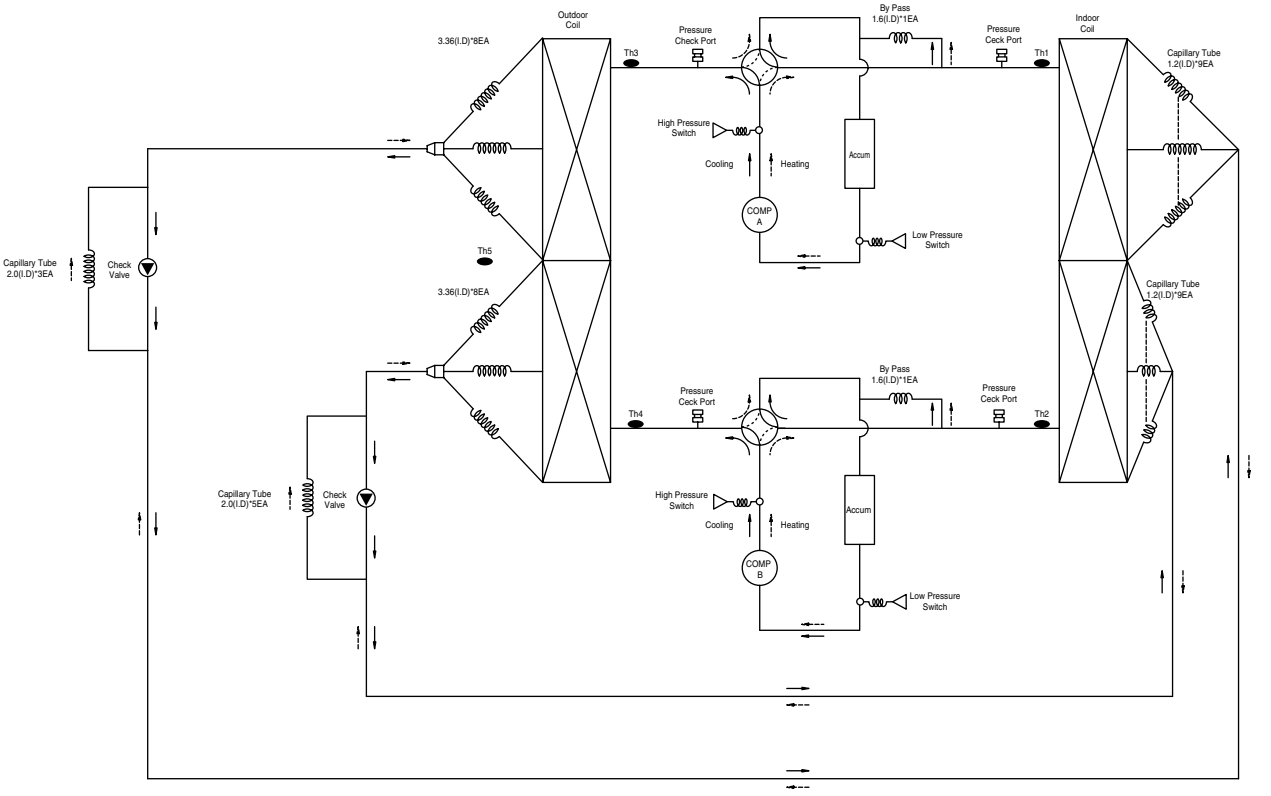
Electrical Characteristics --- Compressor and Outdoor Fan Motor --- 50 Hz

MODEL	Compressor						Outdoor Fan Motor					
	No	Volts	Phase	HP	FLA	LRA	No	Volts	Phase	HP	FLA	LRA
AK-H1208C00	2	380~415	3	7.0	10.4	74.0	1	220~240	1	0.50	3.40	10.5
AK-H1808C00 EK-H1808C00	3			5.0	12.2	75.0	2		1	0.50	3.40	10.80
AK-H2408C00 EK-H2408C00	4			5.0	12.2	75.0	4		1	0.40	2.30	5.20

Note: • FLA-Full Load Amps.
• LRA-Locked Rotor Amps.

12. Piping diagrams

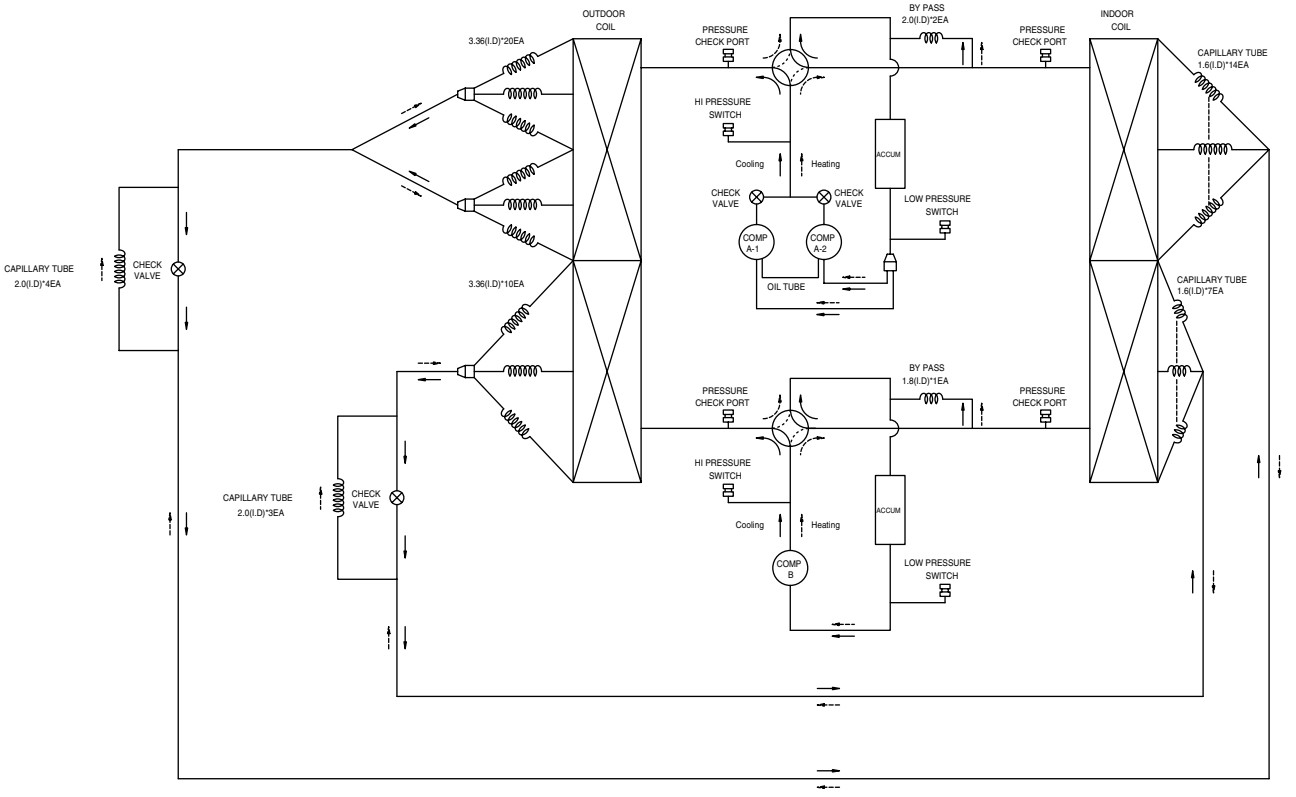
Model No.: AK-H1208C00



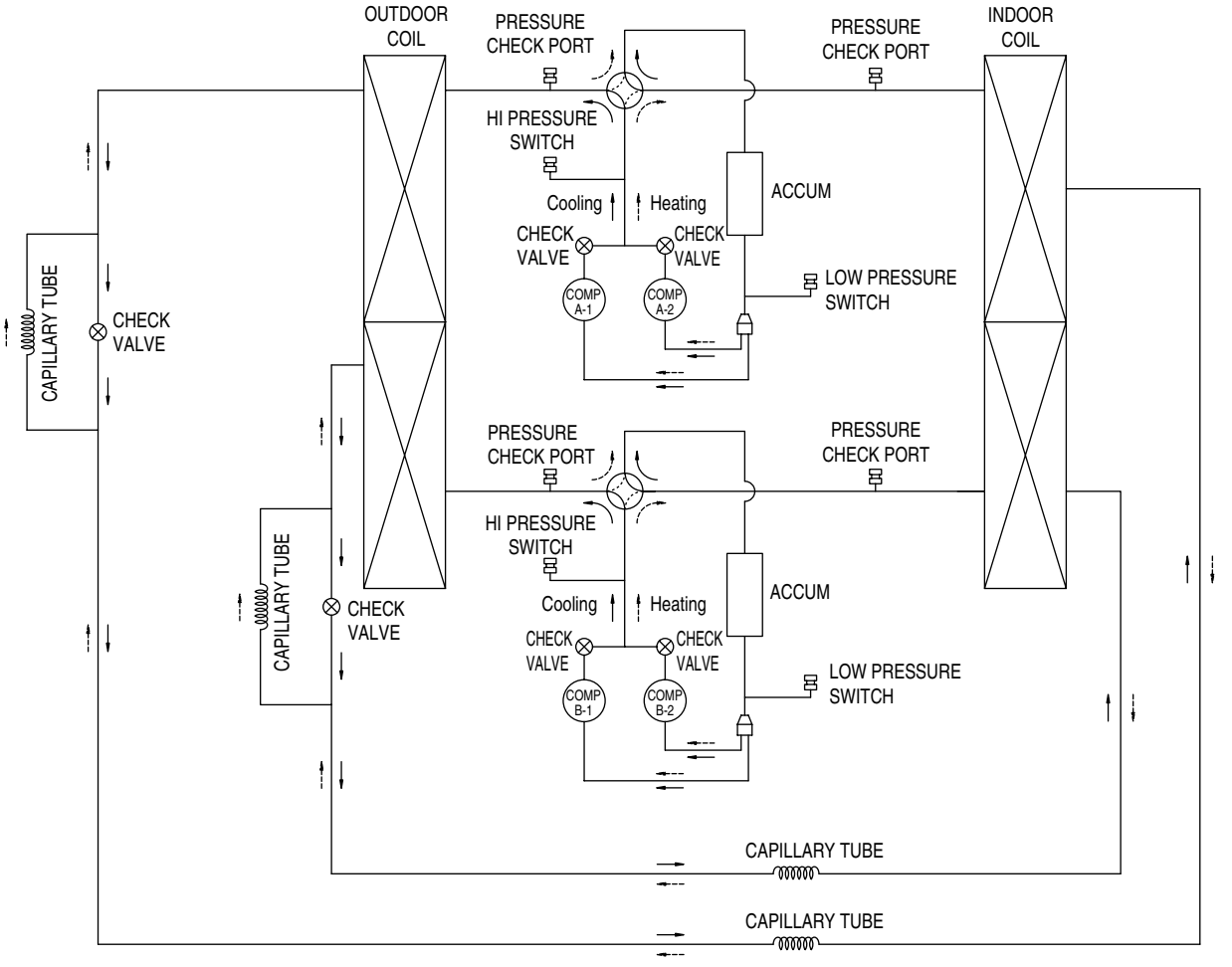
Notes

Th : Thermistor
Th1 : Thermistor Eva. For A Cycle
Th2 : Thermistor Eva. For B Cycle
Th3 : Thermistor Cond. For A Cycle
Th4 : Thermistor Cond. For B Cycle
Th5 : Outdoor Temp. Thermistor

Model No.: AK-H1808C00, EK-H1808C00

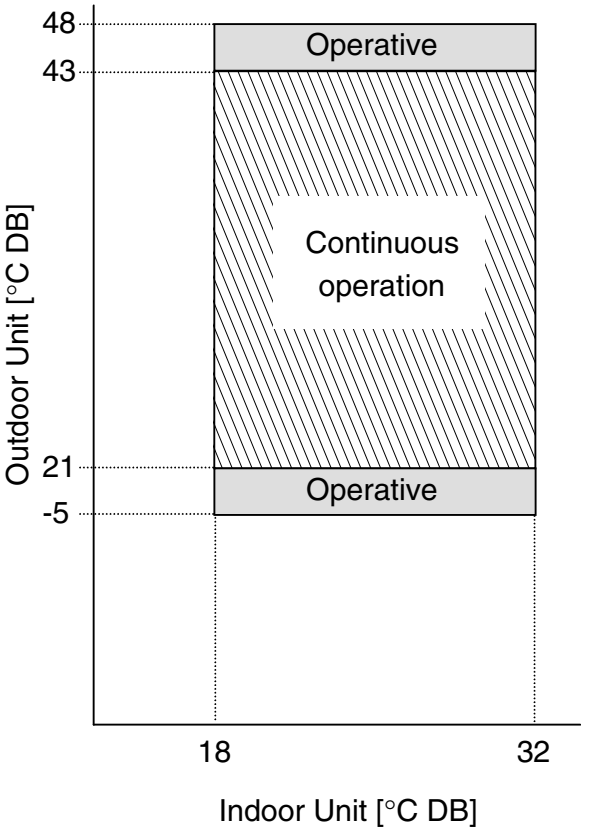


Model No.: AK-H2408C00, EK-H2408C00

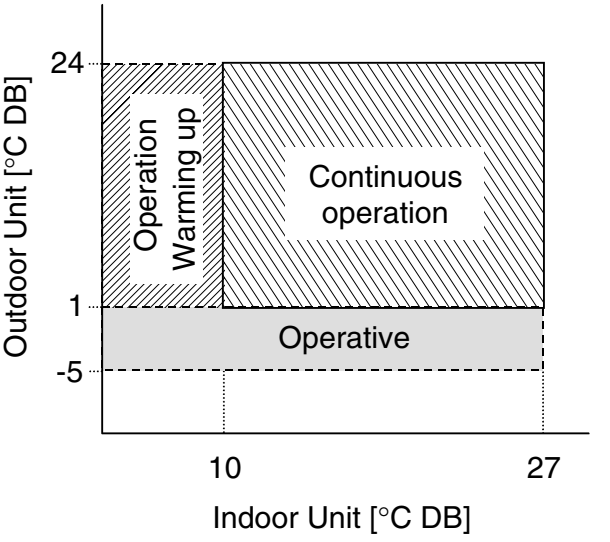


13. Operation range

Cooling



Heating

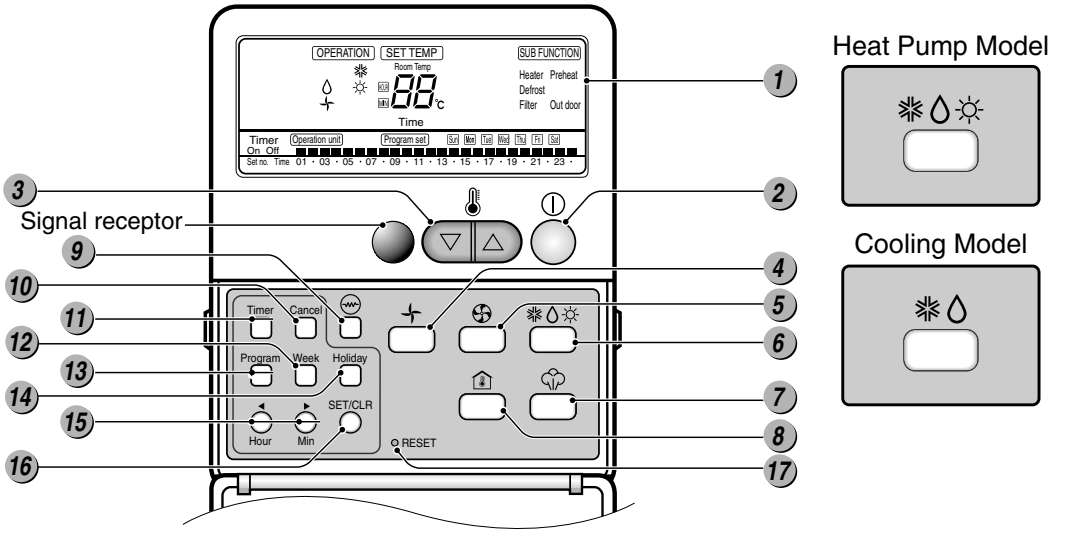


- Although low ambient kit is installed, in case outdoor temperature goes below 0°C, the cooling capacity can be dropped and operation characteristics can be slightly different.

Operative: Intermittent operation according to operation condition (indoor/outdoor temperature, humidity, and load) the heating capacity can be drop

14. Controller

1) LCD wired remote controller



1 Operation display
Displays the operation conditions.

2 On/Off Button
Operation starts when this button is pressed, and stops when the button is pressed again.

3 Set Temperature Button
Used to set the temperature when the desired temperature is obtained.

4 Fan Operation Button
Used to circulate room air without cooling or heating.

5 Fan Auto Button
- Fan AUTO operation mode
  Used to turn the indoor fan motor to on/auto operation mode by alternate pressing.
- Fan ON operation mode

6 Operation Mode Selection Button
Used to select the operation mode.
- Cooling Operation Mode
- Soft Dry Operation Mode
- Heating Operation Mode(except cooling model)

7 Humidify Button

8 Room Temperature Checking Button
Used to check the room temperature.

9 Heater Button

10 Timer Cancel Button
Used to cancel the timer.

11 Timer Set Button
Used to set the timer when the desired time is obtained.

12 Week Button
Used to set a day of the week.

13 Program Button
Used to set the weekly timer.

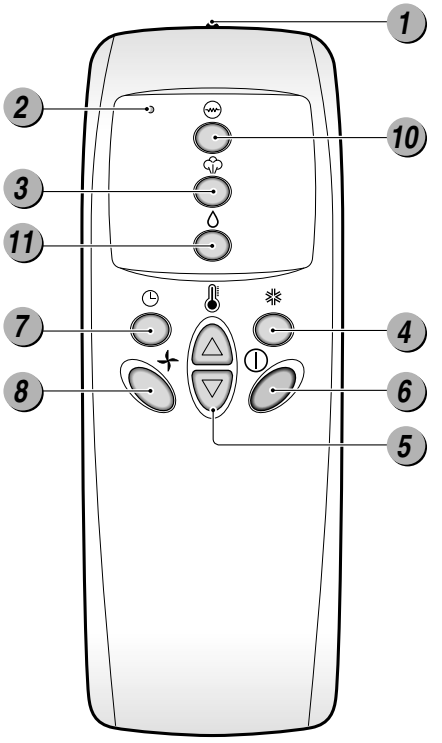
14 Holiday Button
Used to set a holiday of the week.

15 Time Set Button
Used to set the time of the day and change the time in the weekly timer Function.

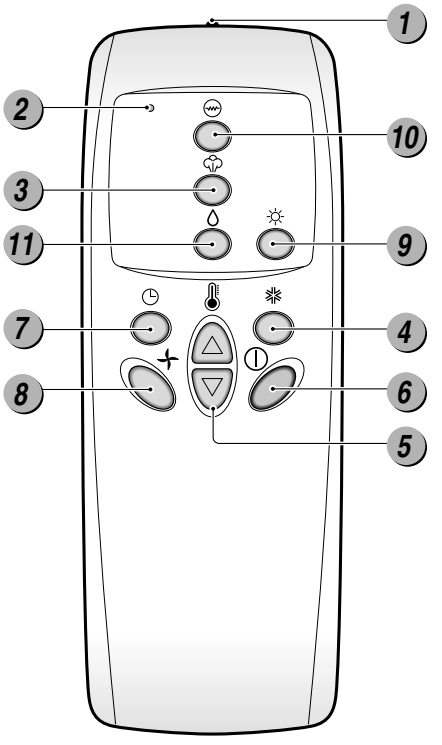
16 Set and Clear Button
Used to set and clear the weekly timer.

17 Reset Button
Used to set the current time and clear the setting time.

2) Wireless remote controller(Accessory)



(Cooling Model)



(Heat pump Model)

1. **Signal Transmitter**
   - Transmits the signals to the air conditioner
2. **Operation Display of the Remote Control**
   - LED displays operation status(on or off) of air conditioner.
3. **Humidify Button**
4. **Cooling ON Button**
5. **Temperature Setting Buttons**
6. **Power ON/OFF Button**
   - Operation will start when this button is pressed, and stop when the button is pressed again.
7. **Timer Set Button**
   - Subsequent pressing of the button, changes the set time in the incremental order from 1 hr to 7 hr. If you select "0:000" the off timer function will be considered.
8. **Indoor Fan Operation Button**
9. **Heating Button (Heat Pump Model Only)**
10. **Electric Heater ON/OFF Button(Optional)**
11. **Soft Dry Operation Button**

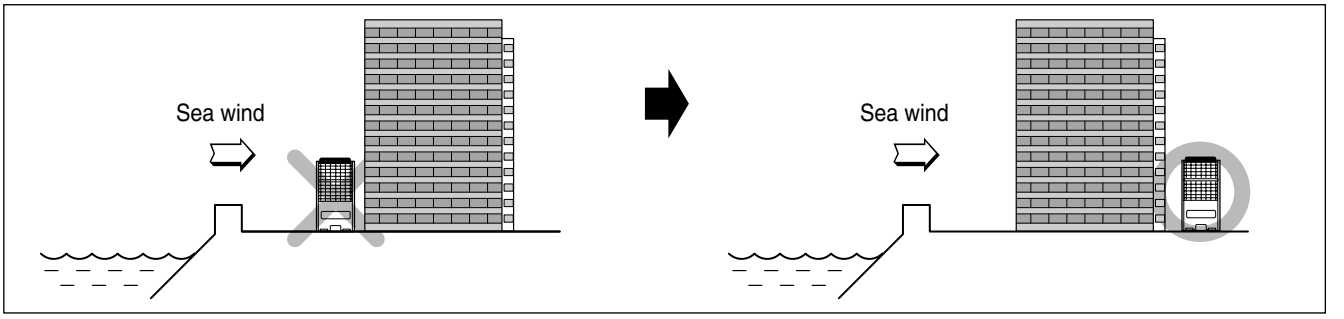
15. Installation guide at the seaside

CAUTION

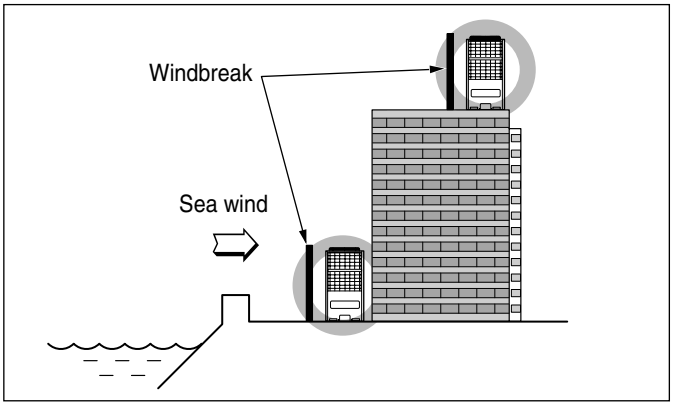
1. **Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.**
2. **Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.**
3. **If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise it needs additional anticorrosion treatment on the heat exchanger.**

Selecting the location(Outdoor Unit)

1) If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.



2) In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It should be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150% of the outdoor unit.
- It should be keep more than 70 cm of space between outdoor unit and the windbreak for easy air flow.

3) Select a well-drained place.

1. If you can't meet above guide line in the seaside installation, please contact LG Electronics for the additional anticorrosion treatment.
2. Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water

16. Mechanical specifications

General
Factory assembled fully self contained, single piece design to operate up to 129°F and down to 14°F in cooling with optional electric heater.
Unit shall be rated in accordance with ARI standard testing procedure, fully charged with R410A. Units shall fully factory test before shipment.

Casing
Unit casing shall be constructed of having gauge zinc coated, galvanized steel. The cabinet shall be exterior painted and weather resistance. The cabinet shall be design to allow maintenance from one side only.
Unit shall have a water and air tight service panels with minimum number of screws per panel for easy servicing.

Filters
Washable filters shall be standard on all units (Except 6.25 Ton unit). Filter rack can be converted to one inch(bellow 7½ ton).
Two inch filters shall be installed on all units above 7.5ton.

Compressors
LG single packaged units shall be direct drive hermetic compressor, reciprocating type with internal built in lubricating mechanism for all moving parts. Motor shall be suction gas cooled with internal temperature and over current sensitive motor over load, for maximum protection. Factory rubber shock mounted and internally spring isolation for sound and vibration control.

Refrigerant Circuits
Each refrigerant circuit shall have independent fixed capillary tube devices and service pressure ports, low pressure switches and refrigerant line filter factory-installed as standard.

Evaporator and Condenser Coils
Shall be aluminum plate fins, mechanically bonded to copper tubes.
Coil shall be factory test for leakage and pressure.

Outdoor Fans
Statically and dynamically, direct drive outdoor fan in vertical discharge position. Permanently lubricated fan motors with built in thermal overload protection.

Indoor Fan
Direct drive indoor motor for 6.25 tons with forward curve centrifugal fans. Belt drive with adjustable motor pulley for all unit above 6.25 ton. All motors shall be thermally overload protected. For higher static pressure requirement over size motor is available.

Controls
All units shall be supplied with centralized micom-processor. Heating and cooling shall be control by micom through input signals from indoor and outdoor temperature sensors. Micom shall provide anti-short cycle timer and time delay between compressor.

17. Appendix

Unit Conversion

Cooling Capacity

RT	Btu/h	kcal/h	W
1	12,000	3024.2	3516.7

Volume

CMM	CFM	l/s
1	35.3	16.67

Length

m	cm	mm	inch
1	100	1000	39.37

Power

HP	W	kW
1	746	0.746

Temperature

$$C = \frac{5}{9}(F - 32)$$

Where,

C is Temperature in °C

F is Temperature in °F

P/No.: 3828A20576W

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The air conditioners manufactured by LG have received ISO9001 certificate for quality assurance and ISO14001 certificate for environmental management system.