

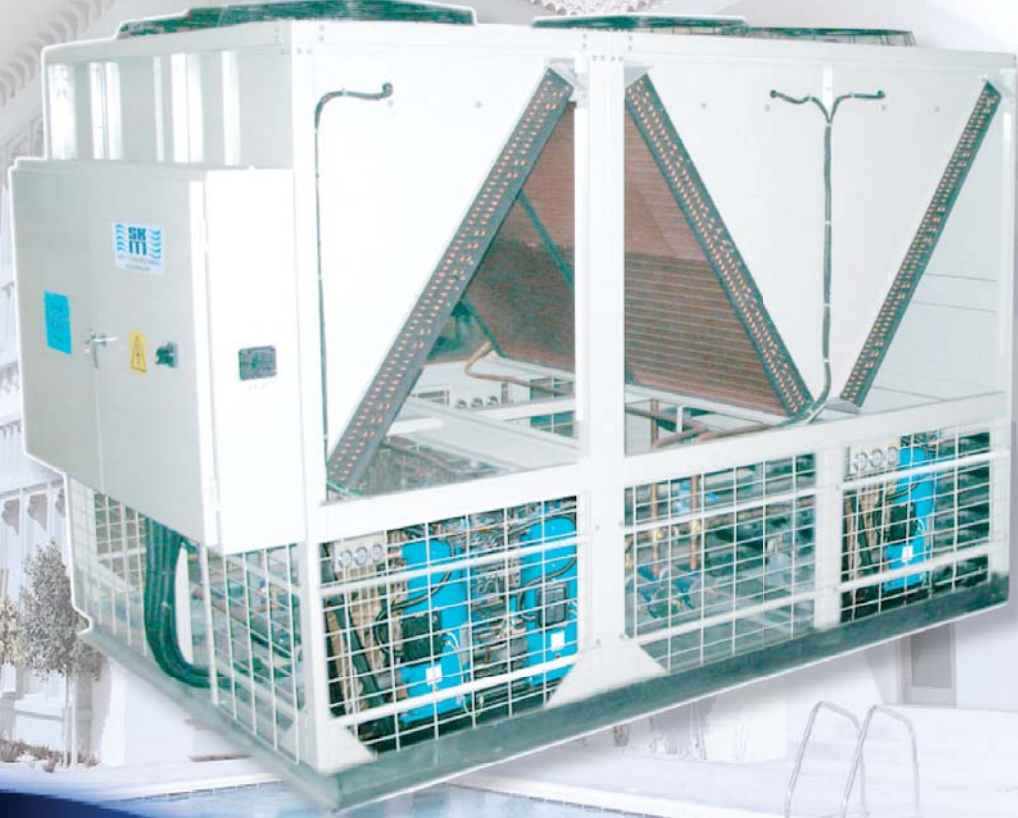
# ACUV-S Series Air Cooled Condensing Units

Range 8 TR to 140 TR  
( 28 kW to 492 kW )



Bulletin # 067/2011

Supersedes Bulletin # 067/2009



ISO 9001  
BUREAU VERITAS  
Certification



R-134a

# SKM Air Cooled Condensing Units ACUV Series - R134a



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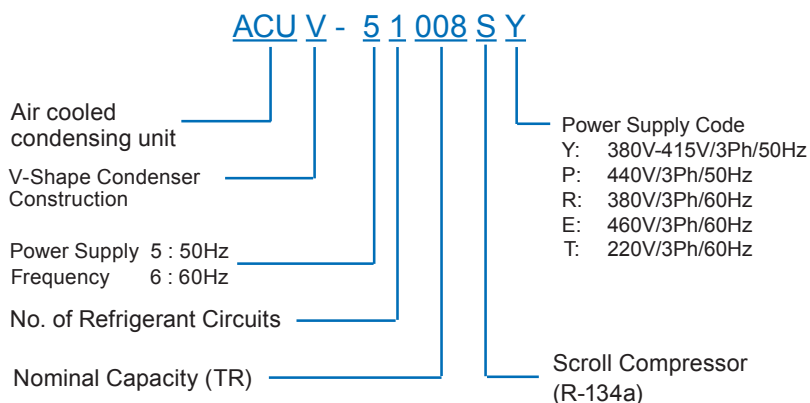
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## Legend

The following abbreviations are used throughout this manual:

BPF..... By-pass Factor	MBh.... BTUH x 1000
cfm ..... Cubic feet per minute	Ph ..... Phase
EER .... Energy Efficiency Ratio	Pa ..... Pascals
Hz ..... Hertz	PD ..... Pressure Drop
inwg .... Inches of water gauge	PI ..... Power Input
kW ..... Kilowatts	RPM .... Rotations per Minute
kg ..... kilogram	TR ..... Tons of Refrigeration = 12 MBh
lbs ..... Pounds weight ( British units )	V ..... Volt
L/S ..... Liters per second	

## Nomenclature



## Introduction

SKM **ACUV** series Air cooled condensing unit are designed for the use on systems with indoor units connected to remote condensing units located outside either on ground or on roof level.

SKM **ACUV** units are manufactured to meet the requirements of the gulf severe climatic conditions.

SKM **ACUV** Air Cooled Condensing unit are ideal for warehouses, large halls, schools, mosques, or wherever the requirement calls for a heavy duty unit with a scroll hermetic compressor.

SKM **ACUV** series Air Cooled Condensing units are used for commercial and industrial applications where high efficient condensing units are needed to match an indoor central station AHUs or coils to get maximum performance advantages of split system with reasonable initial cost.

SKM **ACUV** series provide efficient operation, wide range of design flexibility coupled with packaged concept requiring least on-site work.

The **ACUV** Air Cooled Condensing unit are available in 25 different models from 8 to 118 TR (28 to 415 kW) in 50 Hz and 9 to 140 TR (32 to 492 kW) in 60Hz at nominal conditions in one, two, three or four refrigeration circuits.

SKM **ACUV** Air Cooled Condensing unit are rated in accordance with AHRI-365.

SKM provides qualified service and stock of replacement parts in all major cities of the G.C.C. countries, Egypt, Jordan, and Pakistan. See back cover for details or call SKM.

SKM Air Conditioning Equipment,



*You name it....We cool it*

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### General Features

The **ACUV** series is a modern, diversified and environment friendly series of air cooled condensing unit which use R - 134a as a refrigerant.

The complete **ACUV** condensing unit provides an extremely rugged, heavy duty, long-life and energy efficient that will provide higher efficiency over a long and extended life. What makes **ACUV** series the pride of SKM products is the use of :

- High efficiency totally sealed hermetic scroll compressor.
- Totally enclosed, Class F insulated, IP55 protected condenser fan motor.
- Heavy duty condenser optimised in design for long-life maintenance free operation.
- Cabinet construction specifically designed for Gulf climates.
- IP 54 Electrical panel.

The SKM **ACUV** series air cooled condensing units are durable, dependable, strong, reliable, versatile, quiet and energy efficient. Wherever a heavy duty condensing unit is required, the **ACUV** series should be an automatic choice.

### Component Features

#### Compressor

Compressors used in ACUV Air Cooled Condensing units are hermetically sealed Scroll type.

Compressors conform to internationally recognized standards like CE & UL.

- For models **ACUV-51008S/61009S**, **52015S/62018S** and one compressor from different compressors combination model **ACUV-52017S/62020S**: Compressors have been provided with an internal overload motor protection to prevent against excessive current and temperature.

- For all other models and one compressor from different compressors combination model **ACUV-52017S/62020S**: Compressors have been provided with a preinstalled motor protection module inside the terminal box. This device provides for efficient and reliable protection against overheating and overloading as well as phase loss/reversal.

The Compressors are selected for their extremely high energy efficiency and heavy duty industrial/commercial usage with economy of operation in addition to high technology & low noise.

### Parallel Operation

A parallel compressors installation, with common suction line and common discharge line, give reduced operating cost through greater control of capacity and power consumption. This is achieved by staggering compressor switch-on sequences that allow the parallel system to match its power with the capacity needed. By switching-off individual compressor from parallel installation, while other compressor is operating 100%, the improved part load efficiency can be achieved. The specially developed and adopted oil equalization system ensures correct compressors operation, oil balancing between compressors and reliability.

### Condensers

Condenser coils are manufactured of seamless copper tubes mechanically bonded to aluminum fins to ensure optimum heat transfer.

Condenser Coil



All coils are tested against leakage by air pressure of 450 psig (3100 kPa) under water. All standard coils are 2,3 or 4 rows/14 FPI, 3/8" (9.5 mm) O.D. tubes. An integral subcooling circuit is provided to increase the cooling capacity, without additional operating cost.

For different application requirements, other optional condenser fin materials are available:

- Copper fins.
- Electro-tinned Copper Fins.
- Copper finned coils with electro-tinned after manufacturing.
- Precoated Aluminum fins  
The pre-coated is hydrophobic polyurethane resin. This option provides substantial corrosion protection beyond standard coil construction.
- Aeris Guard Coil Coating  
The Aeris Guard Coil is a self etching high performance modified epoxy finish that is specifically designed to coat and protect Aluminum and Copper surfaces. In addition, the coating is ideal for the protection of ferrous and non ferrous materials.

SKM **ACUV** series, all models, are restricted to a 14FPI (1.8 mm) fin spacing condenser coil.

Gulf dust storms and the general level of available maintenance

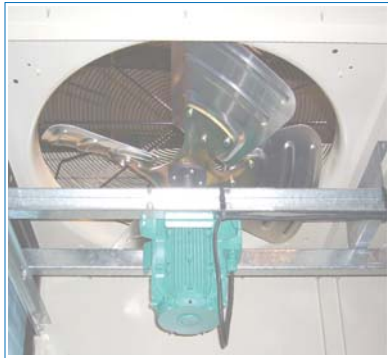
# SKM Air Cooled Condensing Units

## ACUV Series - R134a

in Gulf countries ensures this condenser coil design shall provide long life and maintenance-free operation with the least possibility of operational blockage on the condenser. Ample condenser surface and sensible air flow across the condenser ensures a low temperature differential between condensing temperature and the high Gulf ambients making the **ACUV** condensing unit perform efficiently and durably.

### Condenser Fans

Condenser fans are propeller type, aluminium alloy blades, directly driven by electric motors. Motors are Totally Enclosed Air Over (TEAO) six pole with class 'F' insulation and minimum IP55 protection. The TEAO and class 'F' insulation features ensure long life and are unique for SKM.



**Condenser Fan**

The motors are factory wired, using wires specially selected for high ambients operation, to unit control panel where the motor contactors are located to control the operation of these motors.

The condenser fans are individually statically and dynamically balanced at the factory. Complete fan assembly is provided with suitable acrylic coated fan guard.

### Casing/Structure

Designed for ease of handling and low cost to install. The ACUV Air cooled condensing Units are factory assembled and mounted on a rigid base. The unit casing used in ACUV condensing units is made of zinc coated galvanized steel sheets conforming to JIS-G3302 and ASTM A653 which is phosphatized then baked after an electrostatic powder coat of approximately 60 microns.

This finish and coating pass a 1000 hours in 5% salt spray testing at 95°F (35°C) and 95% relative humidity as per ASTM B117.

The entire assembly comes complete with lifting holes on the base frame for rigging and installation. Access panels are provided for easy service and maintenance.

Options available include hot dipped galvanized base frame and structural members aluminium/stainless steel panels are available, on request, as options.

### Refrigerant Charge

ACUV Air Cooled Condensing units are shipped with nitrogen holding charge only. Actual charging with refrigerant R-134a should be done at site.

### Piping connections

ACUV Air Cooled Condensing units piping connections come, as standard, terminated with sealed and soldered copper pipe ends.

Normal installation would require the cutting off (using roller-type tube cutters) of the ends prior to connections being resoldered and connected to the field supplied refrigerant pipework.

### Refrigerant Pipe work

SKM ACUV series Condensing units are provided with all internal piping, using ACR grade copper tubing, between compressor and condenser.

Loose supplied liquid line refrigerant controls are available as an option for field installation (Please specify CRSP). When ordered this option, the unit should be supplied with a correctly sized thermostatic expansion valve, liquid line solenoid valve, liquid line sight glass/moisture indicator and filter drier having flared or soldered ends isolatable with one shut-off valve.

Shut-off valve for the other side of the filter drier can be supplied, if option CXFV is specified.

# SKM Air Cooled Condensing Units ACUV Series - R134a

## Unit Controller

SKM ACUV-S units are provided with an intelligent and compact electronic controller to maintain the operation of the unit, as a standard feature. This controller, with expansion modules, has a maximum of 24 digital inputs, 8 analog inputs, 16 digital outputs, and 2 analog outputs. It is programmed and factory tested to maintain the trouble free operation of compressor and condenser fans. It manages heat/cool, anti short cycling of compressors, automatic restart after power failure, real time clock and unit alarms. The controller comes with built-in display and function buttons. Display is 4 lines of 12 character and backlit.

## Room Temperature Transmitter

Remote wall mounted digital temperature transmitter provides the signal to the unit controller for start or stop the unit. The provision allows to set the space temperature and LCD continuously shows the current space temperature selectable in °F / °C.

Duct mounted type temperature sensor can be supplied as an option, if required.



**MASTER MODULE**



**EXPANSION MODULES**



**ROOM TEMPERATURE TRANSMITTER**

# SKM Air Cooled Condensing Units ACUV Series - R134a

## Optional Controller for Special Applications

### Micro PLC

A microprogrammable logic controller along with Human Machine Interface (HMI) touch panel and remote mounted transmitter provides a powerful controller to operate where ACUV units requires special applications or additional functionality. The CPU combines a microprocessor, an integrated power supply, input and output circuits housed in a compact body. The controller has status LED's for system fault/diagnostic, Run/Stop, mode selector switch, expansion port, communication port and terminal connectors. The microprocessor contains down loaded programme logic required to monitor and control the input and output devices to suit the operation of ACUV units.

The HMI touch panel displays soft buttons tailored to suite applications for proper operating and monitoring functions. A remote mounted temperature transmitter provides the signal to the controller for start or stop the unit.

A memory cartridge, real time clock and battery can be provided with the controller, if so specified.

Optional BMS interface with communication protocols LON, Modbus RTU & Profibus with separate gateways supports the controller. (Please consult SKM for further details).



MICRO PLC

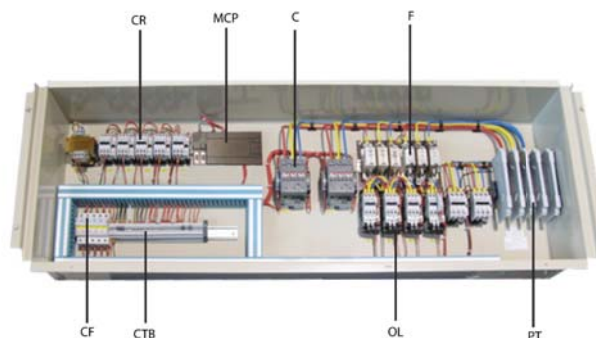


HMI

### Electrical Control Panel

The unit mounted IP-54 control panel enclosure comprises all starting, operating, and safety controls for models up to ACUV-52060S & 62071S are with dead front panel cover screwed onto the enclosure. All other models are provided with external panels having hinged door and key fastener provided for access and security.

All wirings are sized as per NEC regulations. Wiring is fully ferruled enabling ease of proper identification. The control panel is factory wired for 220-240V/1 PH/ 50 & 60Hz control power supply. A Micro Automation logic controller is built-in to control the unit.



#### LEGEND :

- C Contactor
- CF Control Fuse
- CR Control Relay
- CTB Control Terminal Block
- F Power Circuit Fuse
- OL Overload Relay
- PTB Power Terminal Block
- MCP Controller Board

The following standard components are used in all **ACUV** Air Cooled Condensing units:

- Individual contactors for compressor, condenser fan motors.
- Individual over-current protection for condenser fan motors.
- Fuses for condenser fan motors as per NEC.
- Unit Controller/Micro PLC.
- Anti-recycle timer to prevent rapid cycling and short cycling of compressors thru the Micro Controller.
- Low pressure safety switch, one per refrigerant circuit.
- High pressure safety switch, one per compressor.
- Head pressure control by fan cycling for low ambient operation.
- Control disconnect toggle switch.
- Control circuit fuses.
- Power and control circuit terminal blocks.
- 13 Amps, 220Vac socket.

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### Optional Features

#### Alternative Condenser Material

Made of copper tubes and alternative fin material and/or protective coating.

- For Pre Coated aluminum fins, specify **(FAP)**.
- For Aluminum Fins with Aeris Post Coat Protection, specify **(FAA)**.
- For Copper Fins, specify **(FC)**.
- For Copper Fins with Aeris Post Coat Protection,specify **(FCA)**.
- For electrotinned Copper Fins only, specify **(CFT)**.
- For Copper Finned Coils electrotinned post manufacturing, specify **(FCT)**.

#### Condenser Coil Guard **(CGP)**

Galvanized wire mesh frame with painted finish for condensers. Recommended on ground level installations where coil needs to be protected against vandalism.

#### Control Transformer **(CXT)**

This option is necessary and available for **ACUV** models rated for 440V/3PH/50Hz or 460V/3PH/60Hz only. When ordering for these voltages this option **must** be ordered.

#### Hot Gas Bypass System **(GBP)**

With solenoid valve to enable operation of a large sized unit at low loads, like during low ambients due to application requirements.

#### IP-55 Control Panel **(ICP)**

IP55 enclosure for extra protection against elements.

#### Low Ambient Operation Kit **(LAO)**

For operation down to lower than normal Gulf ambients. It is also required for special applications.

#### Pressure Gauges **(SDG)**

Suction and discharge pressure indication of each refrigerant circuit. Gauges are mounted **outside** the Control Panel.

#### Voltage Monitoring Module **(VMM)**

To prevent ACUV unit operation in the event of Phase loss, Phase reversal, and Under / Over voltage on the incoming line voltage.

#### Voltage Monitoring Module **(DVM)**

To meet DEWA Regulations, modified module with time delay relay. This option is available for Dubai, UAE only.

#### Pump Down Facility **(PD)**

The compressor will switch off each time with a Pump Down Cycle in order to prevent Liquid refrigerant migration to the compressor during off Cycle periods.

With this option, each circuit will be provided with an additional discharge check valve to prevent Refrigerant Migration from High side to Low side when the compressor is off.

#### External Overload Protection **(EOP)**

For those electrical specification requires additional overload protection for the compressors.

#### Circuit Breaker for Compressor **(CBC)**

For those electrical specification calls for additional over load and short circuit protection.

#### Main Isolator (Disconnect Switch) **(ISO)**

For the main Power Isolation.

#### Marine Paint **(MP)**

To provide increased corrosion resistance coastal environments and offshore locations.

#### Galvanized Frame And Base **(GFB)**

Steel frame and base which are hot dip galvanized after manufacturing process. This is recommended for highly corrosive environments.

#### Micro PLC

For special application.

### Options for Field Installations

#### Anti-vibration mounts **(CAVM)**

Recommended for roof mounted units or other locations in the vicinity of occupied spaces, where noise/vibration may be objectionable.

#### Hi-Lo Gauges **(CSDG)**

Without piping or isolating pet cocks.

#### Liquid Line Controls **(CRSP)**

Comprises of correctly sized thermostatic expansion valve, suitable solenoid valve,filter drier,sight glass and one number shut-off per circuit

#### Extra Shut Off Valve **(CXFV)**

To fully isolate filter drier, an additional shut-off valve can be incorporated in the liquid line. Must be ordered, if required, with CRSP option.

#### BMS Interface **(BMSI)**

(Please consult SKM).

Special custom built units incorporating specially required features like units with anti-condensation resistance heaters embedded in condenser motors and for off-shore application, special units with stainless steel panels can be manufactured as per customer requirement.

**Contact SKM for all such applications or requirements.**

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### ENGINEERING SPECIFICATIONS - 50 HZ

Model	ACUV	51008-S	51010-S	51013-S	52015-S	51016-S	52017-S	52019-S	
Cooling Capacity (1)	BTUH	90000	114000	152000	178000	184000	196000	224000	
	W	26377	33411	44549	52169	53927	57444	65651	
Cooling Capacity (2)	BTUH	80150	100450	134350	157400	162100	173500	197150	
	W	23491	29440	39376	46131	47509	50850	57781	
Compressor	Type	Hermetic Scroll Compressor							
	Quantity	-	1	1	1	2	1	2	2
	Oil Charge per Circuit (1/2/3/4)	US Gal	0.95	1.64	2.11	0.95/0.95	2.11	1.64/0.95	1.64/1.64
		Liter	3.6	6.2	8.0	3.6/3.6	8.0	6.2/3.6	6.2/6.2
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins							
	Face Area	ft <sup>2</sup>	19.4	19.4	24.4	24.4	24.4	24.4	29.3
		m <sup>2</sup>	1.8	1.8	2.3	2.3	2.3	2.3	2.7
Condenser Fan	Type	Propeller direct drive 960 RPM							
	Code / Qty.	-	628/2	628/2	723/2	723/2	723/2	723/2	823/2
	Air Flow Rate	cfm	9240	8920	13240	13240	13240	13240	17880
		l/s	4361	4210	6249	6249	6249	6249	8438
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55							
	Size / Quantity	kW	0.37/2	0.37/2	0.75/2	0.75/2	0.75/2	0.75/2	1.5/2
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	9.7	14.8	18.3	9.3/9.3	18.3	11.6/8.9	11.5/11.5	
	kg	4.4	6.7	8.3	4.2/4.2	8.3	5.3/4.1	5.2/5.2	
Number of Refrigerant Circuits	-	1	1	1	2	1	2	2	
Unit Operating Weight	lbs	809	889	1142	1169	1142	1213	1319	
	kg	367	403	518	530	518	550	598	

Model	ACUV	52022-S	52025-S	52028-S	52030-S	52036-S	52043-S	52048-S	
Cooling Capacity (1)	BTUH	256000	300000	330000	360000	440000	510000	580000	
	W	75029	87925	96717	105510	128957	149472	169988	
Cooling Capacity (2)	BTUH	225800	264750	292050	318350	387800	452300	510700	
	W	66178	77594	85595	93303	113658	132562	149678	
Compressor	Type	Hermetic Scroll Compressor							
	Quantity	-	2	2	2	2	4	4	4
	Oil Charge per Circuit (1/2/3/4)	US Gal	2.11/1.64	2.11/2.11	2.11/2.11	2.11/2.11	3.28/3.28	3.75/3.75	4.22/4.22
		Liter	8.0/6.2	8.0/8.0	8.0/8.0	8.0/8.0	12.4/12.4	14.2/14.2	16.0/16.0
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins							
	Face Area	ft <sup>2</sup>	31.5	40.0	40.0	40.0	53.3	64.0	72.0
		m <sup>2</sup>	2.9	3.7	3.7	3.7	5.0	5.9	6.7
Condenser Fan	Type	Propeller direct drive 960 RPM							
	Code / Qty.	-	823/2	823/3	823/3	823/3	829/3	823/4	823/4
	Air Flow Rate	cfm	18180	26160	26160	26160	32040	36480	37280
		l/s	8580	12346	12346	12346	15121	17217	17594
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55							
	Size / Qty.	kW	1.5/2	1.5/3	1.5/3	1.5/3	1.5/3	1.5/4	1.5/4
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	15.6/10.8	15.2/15.2	18.0/14.3	15.6/15.6	21.7/21.7	29.9/29.9	34.1/34.1	
	kg	7.1/4.9	6.9/6.9	8.2/6.5	7.1/7.1	9.8/9.8	13.6/13.6	14.5/14.5	
Number of Refrigerant Circuits	-	2	2	2	2	2	2	2	
Unit Operating Weight	lbs	1464	1764	1764	1764	2062	3277	3585	
	kg	664	800	800	800	935	1486	1626	

Table 1

- 1). Cooling capacity at 95°F (35°C) ambient temperature according to AHRI-365.
- 2). Cooling capacity at Gulf conditions : 115°F (46.1°C) condenser entering air temperature & 45°F (7.2°C) SST.
- 3). Operating charge is approximate for condensing unit only and does not include refrigerant lines and evaporator coil.
- 4). Condensing units are shipped with nitrogen holding charge only.

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### ENGINEERING SPECIFICATIONS - 50 Hz

Model	ACUV	52053-S	52060-S	53064-S	53071-S	53079-S	53084-S	
Cooling Capacity (1)	BTUH	645000	720000	770000	860000	955000	1015000	
	W	189039	211020	225674	252052	279894	297479	
Cooling Capacity (2)	BTUH	568950	636750	679500	757700	840600	893000	
	W	166750	186621	199150	222069	246366	261723	
Compressor	Type	Hermetic Scroll Compressor						
	Quantity	-	4	4	6	6	6	
	Oil Charge per Circuit (1/2/3/4)	US Gal	4.22/4.22	4.22/4.22	3.75/3.75/3.75	4.22/4.22/4.22	4.22/4.22/4.22	4.22/4.22/4.22
		Liter	16.0/16.0	16.0/16.0	14.2/14.2/14.2	16.0/16.0/16.0	16.0/16.0/16.0	16.0/16.0/16.0
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins						
	Face Area	ft <sup>2</sup>	72.0	72.0	97.5	97.5	97.5	97.5
		m <sup>2</sup>	6.7	6.7	9.1	9.1	9.1	9.1
Condenser Fan	Type	Propeller direct drive 960 RPM						
	Code / Qty.	-	829/4	829/4	823/6	823/6	829/6	829/6
	Air Flow Rate	cfm	42880	40920	54900	54900	59340	59340
		l/s	20237	19312	25910	25910	28005	28005
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55						
	Size / Quantity	kW	1.5/4	1.5/4	1.5/6	1.5/6	1.5/6	1.5/6
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	31.9/31.9	35.9/35.9	28.8/28.8/28.8	28.8/28.8/28.8	35.7/35.7/35.7	35.7/35.7/35.7	
	kg	14.5/14.5	16.3/16.3	13.1/13.1/13.1	13.1/13.1/13.1	16.2/16.2/16.2	16.2/16.2/16.2	
Number of Refrigerant Circuits	-	2	2	3	3	3	3	
Unit Operating Weight	lbs	3585	3815	6139	6533	6727	6727	
	kg	1626	1730	2784	2963	3051	3051	

Model	ACUV	53086-S	54095-S	54106-S	54111-S	54118-S	
Cooling Capacity (1)	BTUH	1040000	1160000	1280000	1340000	1430000	
	W	304807	339977	375147	392732	419109	
Cooling Capacity (2)	BTUH	918700	1022350	1129650	1182000	1258750	
	W	269256	299634	331081	346424	368919	
Compressor	Type	Hermetic Scroll Compressor					
	Quantity	-	6	8	8	8	
	Oil Charge per Circuit (1/2/3/4)	US Gal	4.22/4.22/4.22	4.22/4.22/4.22/4.22	4.22/4.22/4.22/4.22	4.22/4.22/4.22/4.22	4.22/4.22/4.22/4.22
		Liter	16.0/16.0/16.0	16.0/16.0/16.0/16.0	16.0/16.0/16.0/16.0	16.0/16.0/16.0/16.0	16.0/16.0/16.0/16.0
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins					
	Face Area	ft <sup>2</sup>	97.5	130.0	130.0	130.0	130.0
		m <sup>2</sup>	9.1	12.1	12.1	12.1	12.1
Condenser Fan	Type	Propeller direct drive 960 RPM					
	Code / Qty.	-	829/6	829/8	829/8	829/8	829/8
	Air Flow Rate	cfm	59340	83360	79120	79120	79120
		l/s	28005	39342	37340	37340	37340
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55					
	Size / Qty.	kW	1.5/6	1.5/8	1.5/8	1.5/8	1.5/8
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	35.7/35.7/35.7	31.3/31.3/31.3/31.3	38.8/38.8/38.8/38.8	38.8/38.8/38.8/38.8	38.8/38.8/38.8/38.8	
	kg	16.2/16.2/16.2	14.2/14.2/14.2/14.2	17.6/17.6/17.6/17.6	17.6/17.6/17.6/17.6	17.6/17.6/17.6/17.6	
Number of Refrigerant Circuits	-	3	4	4	4	4	
Unit Operating Weight	lbs	6727	8293	8551	8551	8551	
	kg	3051	3761	3878	3878	3878	

Table 1 ends

- 1). Cooling capacity at 95°F (35°C) ambient temperature according to AHRI-365.
- 2). Cooling capacity at Gulf conditions : 115°F (46.1°C) condenser entering air temperature & 45°F (7.2°C) SST.
- 3). Operating charge is approximate for condensing unit only and does not include refrigerant lines and evaporator coil.
- 4). Condensing units are shipped with nitrogen holding charge only.



# SKM Air Cooled Condensing Units ACUV Series - R134a

## ENGINEERING SPECIFICATIONS - 60 Hz

Model	ACUV	61009-S	61011-S	61016-S	62018-S	61018-S	62020-S	62022-S	
Cooling Capacity (1)	BTUH	106000	134000	182000	208000	216000	232000	264000	
	W	31067	39273	53341	60961	63306	67995	77374	
Cooling Capacity (2)	BTUH	94250	119500	161500	184800	191600	204350	233600	
	W	27623	35023	47333	54162	56155	59892	68464	
Compressor	Type	Hermetic Scroll Compressor							
	Quantity	-	1	1	1	2	1	2	2
	Oil Charge per Circuit (1/2/3/4)	US Gal	0.95	1.64	2.11	0.95/0.95	2.11	1.64/0.95	1.64/1.64
Liter		3.6	6.2	8.0	3.6/3.6	8.0	6.2/3.6	6.2/6.2	
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins							
	Face Area	ft <sup>2</sup>	19.4	19.4	24.4	24.4	24.4	24.4	29.3
		m <sup>2</sup>	1.8	1.8	2.3	2.3	2.3	2.3	2.7
Condenser Fan	Type	Propeller direct drive 1150 RPM							
	Code / Qty.	-	628/2	628/2	723/2	723/2	723/2	723/2	823/2
	Air Flow Rate	cfm	11200	10820	15660	15660	15660	15660	21760
l/s		5286	5106	7391	7391	7391	7391	10270	
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55							
	Size / Quantity	kW	0.55/2	0.55/2	1.1/2	1.1/2	1.1/2	1.1/2	2.2/2
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	9.7	14.8	18.3	9.3/9.3	18.3	11.6/8.9	11.5/11.5	
	kg	4.4	6.7	8.3	4.2/4.2	8.3	5.3/4.0	5.2/5.2	
Number of Refrigerant Circuits	-	1	1	1	2	1	2	2	
Unit Operating Weight	lbs	816	895	1142	1169	1142	1213	1319	
	kg	370	406	518	530	518	550	598	

Model	ACUV	62026-S	62030-S	62033-S	62036-S	62043-S	62051-S	62058-S	
Cooling Capacity (1)	BTUH	306000	360000	394000	425000	520000	610000	695000	
	W	89683	105510	115475	124560	152403	178781	203693	
Cooling Capacity (2)	BTUH	269300	317900	347450	375750	458750	539550	612700	
	W	78927	93171	101832	110126	134452	158133	179572	
Compressor	Type	Hermetic Scroll Compressor							
	Quantity	-	2	2	2	2	4	4	4
	Oil Charge per Circuit (1/2/3/4)	US Gal	2.11/1.64	2.11/2.11	2.11/2.11	2.11/2.11	3.28/3.28	3.75/3.75	4.22/4.22
Liter		8.0/6.2	8.0/8.0	8.0/8.0	8.0/8.0	12.4/12.4	14.2/14.2	16.0/16.0	
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins							
	Face Area	ft <sup>2</sup>	31.5	40.0	40.0	40.0	53.3	64.0	72.0
		m <sup>2</sup>	2.9	3.7	3.7	3.7	5.0	5.9	6.7
Condenser Fan	Type	Propeller direct drive 1150 RPM							
	Code / Qty.	-	823/2	823/3	823/3	823/3	829/3	823/4	823/4
	Air Flow Rate	cfm	22120	31860	31860	31860	38700	44400	45400
l/s		10439	15036	15036	15036	18264	20954	21426	
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55							
	Size / Qty.	kW	2.2/2	2.2/3	2.2/3	2.2/3	2.2/3	2.2/4	2.2/4
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	15.6/10.8	15.2/15.2	18.0/14.3	15.6/15.6	21.7/21.7	29.9/29.9	34.1/34.1	
	kg	7.1/4.9	6.9/6.9	8.2/6.5	7.1/7.1	9.8/9.8	13.6/13.6	14.5/14.5	
Number of Refrigerant Circuits	-	2	2	2	2	2	2	2	
Unit Operating Weight	lbs	1464	1764	1764	1764	2090	3277	3585	
	kg	664	800	800	800	948	1486	1626	

Table 2

- Cooling capacity at 95°F (35°C) ambient temperature according to AHRI-365.
- Cooling capacity at Gulf conditions : 115°F (46.1°C) condenser entering air temperature & 45°F (7.2°C) SST.
- Operating charge is approximate for condensing unit only and does not include refrigerant lines and evaporator coil.
- Condensing units are shipped with nitrogen holding charge only.

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### ENGINEERING SPECIFICATIONS - 60 Hz

Model	ACUV	62063-S	62071-S	63076-S	63085-S	63094-S	63100-S	
Cooling Capacity (1)	BTUH	765000	855000	920000	1030000	1140000	1205000	
	W	224209	250586	269637	301876	334115	353165	
Cooling Capacity (2)	BTUH	675250	754350	810850	907450	1004850	1061850	
	W	197904	221087	237647	265958	294505	311210	
Compressor	Type	Hermetic Scroll Compressor						
	Quantity	-	4	4	6	6	6	
	Oil Charge per Circuit (1/2/3/4)	US Gal	4.22/4.22	4.22/4.22	3.75/3.75/3.75	4.22/4.22/4.22	4.22/4.22/4.22	4.22/4.22/4.22
		Liter	16.0/16.0	16.0/16.0	14.2/14.2/14.2	16.0/16.0/16.0	16.0/16.0/16.0	16.0/16.0/16.0
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins						
	Face Area	ft <sup>2</sup>	72.0	72.0	97.5	97.5	97.5	97.5
		m <sup>2</sup>	6.7	6.7	9.1	9.1	9.1	9.1
Condenser Fan	Type	Propeller direct drive 1150 RPM						
	Code / Qty.	-	829/4	829/4	823/6	823/6	829/6	829/6
	Air Flow Rate	cfm	51760	49560	66840	66840	72000	72000
		l/s	24428	23390	31545	31545	33980	33980
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55						
	Size / Quantity	kW	2.2/4	2.2/4	2.2/6	2.2/6	2.2/6	2.2/6
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	31.9/31.9	35.9/35.9	28.8/28.8/28.8	28.8/28.8/28.8	35.7/35.7/35.7	35.7/35.7/35.7	
	kg	14.5/14.5	16.3/16.3	13.1/13.1/13.1	13.1/13.1/13.1	16.2/16.2/16.2	16.2/16.2/16.2	
Number of Refrigerant Circuits	-	2	2	3	3	3	3	
Unit Operating Weight	lbs	3625	3850	6139	6584	7045	7045	
	kg	1644	1746	2784	2986	3195	3195	

Model	ACUV	63102-S	64113-S	64126-S	64132-S	64140-S	
Cooling Capacity (1)	BTUH	1235000	1385000	1530000	1595000	1690000	
	W	361958	405920	448417	467468	495311	
Cooling Capacity (2)	BTUH	1089400	1223200	1349400	1405800	1489000	
	W	319285	358499	395487	412016	436401	
Compressor	Type	Hermetic Scroll Compressor					
	Quantity	-	6	8	8	8	
	Oil Charge per Circuit (1/2/3/4)	US Gal	4.22/4.22/4.22	4.22/4.22/4.22/4.22	4.22/4.22/4.22/4.22	4.22/4.22/4.22/4.22	4.22/4.22/4.22/4.22
		Liter	16.0/16.0/16.0	16.0/16.0/16.0/16.0	16.0/16.0/16.0/16.0	16.0/16.0/16.0/16.0	16.0/16.0/16.0/16.0
Condenser Coil	Type	Air cooled 2, 3 or 4 rows 14 FPI (1.8 mm) fin spacing Cu tubes Al fins					
	Face Area	ft <sup>2</sup>	97.5	130.0	130.0	130.0	130.0
		m <sup>2</sup>	9.1	12.1	12.1	12.1	12.1
Condenser Fan	Type	Propeller direct drive 1150 RPM					
	Code / Qty.	-	829/6	829/8	829/8	829/8	829/8
	Air Flow Rate	cfm	72000	100880	96000	96000	96000
		l/s	33980	47610	45307	45307	45307
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55					
	Size / Qty.	kW	2.2/6	2.2/8	2.2/8	2.2/8	2.2/8
Refrigerant (R - 134a) Operating Charge per Circuit (1/2/3/4) (3)	lbs	35.7/35.7/35.7	31.3/31.3/31.3/31.3	38.8/38.8/38.8/38.8	38.8/38.8/38.8/38.8	38.8/38.8/38.8/38.8	
	kg	16.2/16.2/16.2	14.2/14.2/14.2/14.2	17.6/17.6/17.6/17.6	17.6/17.6/17.6/17.6	17.6/17.6/17.6/17.6	
Number of Refrigerant Circuits	-	3	4	4	4	4	
Unit Operating Weight	lbs	6787	8370	8630	8630	8630	
	kg	3078	3796	3914	3914	3914	

Table 2 ends

- Cooling capacity at 95°F (35°C) ambient temperature according to AHRI-365.
- Cooling capacity at Gulf conditions : 115°F (46.1°C) condenser entering air temperature & 45°F (7.2°C) SST.
- Operating charge is approximate for condensing unit only and does not include refrigerant lines and evaporator coil.
- Condensing units are shipped with nitrogen holding charge only.



# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### CAPACITY RATINGS - 50 Hz

Model ACUV-S	SST		Condenser Entering Air Temperature											
			95°F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
			Total Capacity		PI	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI
	°F	°C	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW
51008-S	35	1.7	73.9	21.7	6.2	69.3	20.3	7	64.8	19	7.9	60.2	17.6	8.8
	40	4.4	82.1	24.1	6.4	77.1	22.6	7.2	72.1	21.1	8.1	67.1	19.7	8.9
	45	7.2	90.9	26.6	6.5	85.4	25	7.4	79.9	23.4	8.3	74.4	21.8	9.1
	50	10	100.2	29.4	6.7	94.2	27.6	7.6	88.2	25.9	8.4	82.2	24.1	9.3
51010-S	35	1.7	92.9	27.2	7.5	87.3	25.6	8.4	81.4	23.9	9.4	75.6	22.2	10.4
	40	4.4	103	30.2	7.7	96.9	28.4	8.6	90.5	26.5	9.6	84.3	24.7	10.6
	45	7.2	113.7	33.3	7.8	107	31.4	8.8	100.2	29.4	9.8	93.5	27.4	10.8
51013-S	35	1.7	123.2	36.1	10.3	115.9	34	11.5	108.5	31.8	12.8	101.1	29.6	14
	40	4.4	136.9	40.1	10.6	128.9	37.8	11.8	120.7	35.4	13	112.6	33	14.3
	45	7.2	151.7	44.5	10.8	142.8	41.9	12	133.9	39.2	13.3	125	36.6	14.6
	50	10	167.7	49.1	11.1	157.9	46.3	12.3	148	43.4	13.6	138.3	40.5	14.8
51016-S	35	1.7	150.1	44	13.4	141	41.3	14.9	131.7	38.6	16.5	122.5	35.9	18.1
	40	4.4	166.3	48.7	13.8	156.2	45.8	15.3	146.1	42.8	17	136.2	39.9	18.5
	45	7.2	183.5	53.8	14.2	172.6	50.6	15.8	161.6	47.4	17.4	150.9	44.2	18.9
	50	10	201.9	59.2	14.7	190	55.7	16.3	178.1	52.2	17.9	166.7	48.8	19.4
52015-S	35	1.7	145.7	42.7	12.8	136.6	40	14.5	127.5	37.4	16.2	118.5	34.7	18
	40	4.4	161.7	47.4	13.1	151.7	44.5	14.8	141.8	41.6	16.6	131.8	38.6	18.2
	45	7.2	178.8	52.4	13.5	167.9	49.2	15.2	156.9	46	17	146	42.8	18.6
	50	10	196.9	57.7	13.9	185	54.2	15.6	173	50.7	17.4	161.1	47.2	18.9
52017-S	35	1.7	161.6	47.4	14.6	151.4	44.4	16.4	141.1	41.4	18.3	131	38.4	20
	40	4.4	178.9	52.4	15	167.8	49.2	16.8	156.6	45.9	18.7	145.7	42.7	20.4
	45	7.2	197.3	57.8	15.4	185.1	54.3	17.3	173	50.7	19.1	161.3	47.3	20.7
	50	10	216.6	63.5	15.9	203.5	59.6	17.7	190.4	55.8	19.5	177.8	52.1	21.1
52019-S	35	1.7	183.1	53.7	15.4	171.8	50.4	17.3	160.1	46.9	19.3	148.7	43.6	21.3
	40	4.4	202.8	59.4	15.8	190.5	55.8	17.7	177.8	52.1	19.7	165.5	48.5	21.6
	45	7.2	223.6	65.5	16.2	210.2	61.6	18.1	196.6	57.6	20.1	183.5	53.8	22
	50	10	245.6	72	16.6	231.1	67.7	18.6	216.5	63.4	20.5	202.6	59.4	22.3
52022-S	35	1.7	209.6	61.4	18.8	196.7	57.6	21	183.5	53.8	23.3	170.6	50	25.4
	40	4.4	232.1	68	19.4	217.9	63.9	21.6	203.6	59.7	23.8	189.7	55.6	25.9
	45	7.2	256.1	75.1	19.9	240.6	70.5	22.2	225.1	66	24.4	210.1	61.6	26.4
	50	10	281.6	82.5	20.5	264.7	77.6	22.8	248	72.7	25	231.7	67.9	26.9
52025-S	35	1.7	243.6	71.4	21.1	229	67.1	23.5	214.3	62.8	26	199.5	58.5	28.5
	40	4.4	270.4	79.3	21.6	254.4	74.6	24	238.1	69.8	26.6	222	65.1	29
	45	7.2	299.4	87.7	22.2	281.6	82.5	24.7	263.8	77.3	27.2	246.2	72.2	29.6
	50	10	330.4	96.8	22.8	310.9	91.1	25.3	291.4	85.4	27.9	272	79.7	30.2
52028-S	35	1.7	270.2	79.2	24.2	253.7	74.4	26.9	237.1	69.5	29.8	220.6	64.7	32.6
	40	4.4	299.4	87.7	24.9	281.3	82.5	27.7	263.1	77.1	30.6	245.2	71.9	33.3
	45	7.2	330.7	96.9	25.7	310.9	91.1	28.5	291.1	85.3	31.4	271.6	79.6	34
	50	10	364	106.7	26.5	342.5	100.4	29.4	321	94.1	32.2	299.9	87.9	34.8
52030-S	35	1.7	295.9	86.7	27.5	277.6	81.4	30.6	259.1	75.9	33.8	241	70.6	36.7
	40	4.4	327.3	95.9	28.4	307.3	90.1	31.5	287.2	84.2	34.7	267.7	78.5	37.6
	45	7.2	360.9	105.8	29.3	339.1	99.4	32.5	317.3	93	35.7	296.3	86.9	38.5
	50	10	396.4	116.2	30.4	372.8	109.3	33.6	349.5	102.4	36.7	327	95.9	39.5
52036-S	35	1.7	361.4	105.9	31.6	338.7	99.3	35.4	315.5	92.5	39.5	292.9	85.9	43.2
	40	4.4	399.9	117.2	32.4	375.2	110	36.3	350.1	102.6	40.3	326	95.6	44
	45	7.2	440.6	129.1	33.3	413.7	121.3	37.3	386.8	113.4	41.2	361.2	105.9	44.7
	50	10	483.3	141.7	34.3	454.3	133.2	38.2	425.6	124.7	42.1	398.7	116.8	45.4
52043-S	35	1.7	419.8	123	37.6	393.8	115.4	41.9	367.5	107.7	46.5	341.7	100.2	50.8
	40	4.4	464.9	136.3	38.6	436.5	127.9	43.1	407.9	119.5	47.6	380	111.4	51.7
	45	7.2	513	150.4	39.8	482	141.3	44.2	450.9	132.2	48.7	420.7	123.3	52.7
	50	10	564.1	165.3	41	530.3	155.4	45.4	496.7	145.6	49.8	464.2	136.1	53.7

Table 3

Computer Print outs for matched ratings with SKM Air Handling Units are available.

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### CAPACITY RATINGS - 50 Hz

Model ACUV-S	SST		Condenser Entering Air Temperature											
			95°F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
	°F	°C	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI
		MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	
52048-S	35	1.7	473.7	138.8	44.3	444.6	130.3	49.2	415.3	121.7	54.3	386.5	113.3	59
	40	4.4	524.5	153.7	45.6	492.6	144.4	50.6	460.6	135	55.6	429.1	125.8	60.2
	45	7.2	579.1	169.7	47.1	544	159.5	52.1	509	149.2	57	474.5	139.1	61.4
	50	10	637.3	186.8	48.6	599	175.6	53.7	560.8	164.4	58.5	522.9	153.3	62.6
52053-S	35	1.7	529.2	155.1	50.2	496.4	145.5	55.8	463.4	135.8	61.5	431.1	126.3	66.7
	40	4.4	585.4	171.6	51.8	549.5	161	57.5	513.5	150.5	63.1	478.4	140.2	68.2
	45	7.2	645.4	189.2	53.6	606.2	177.7	59.3	567.2	166.2	64.9	529.2	155.1	69.7
	50	10	709.2	207.9	55.5	666.6	195.4	61.2	624.4	183	66.7	583.4	171	71.3
52060-S	35	1.7	591.8	173.5	54.9	555.2	162.7	61.1	518.3	151.9	67.5	482.1	141.3	73.5
	40	4.4	654.7	191.9	56.7	614.7	180.2	63	574.5	168.4	69.4	535.4	156.9	75.2
	45	7.2	721.8	211.6	58.7	678.2	198.8	65.1	634.8	186	71.4	592.7	173.7	77
	50	10	793	232.4	60.8	745.8	218.6	67.3	699.1	204.9	73.5	654.2	191.7	78.9
53064-S	35	1.7	630.4	184.8	56.3	591.6	173.4	62.8	552.1	161.8	69.6	513.3	150.5	76.1
	40	4.4	698.3	204.7	57.8	655.7	192.2	64.4	612.7	179.6	71.2	570.8	167.3	77.5
	45	7.2	770.6	225.9	59.5	724.1	212.2	66.2	677.4	198.6	72.9	632.1	185.3	78.9
	50	10	847.5	248.4	61.3	796.8	233.5	68	746.3	218.7	74.6	697.4	204.4	80.4
53071-S	35	1.7	704.4	206.5	67.5	660.8	193.7	74.9	617.1	180.9	82.4	574.2	168.3	89.3
	40	4.4	779.5	228.5	69.6	731.7	214.5	77	683.9	200.5	84.5	637	186.7	91.1
	45	7.2	859.9	252	71.8	807.5	236.7	79.4	755.4	221.4	86.6	704	206.3	93
	50	10	945.6	277.1	74.3	888.4	260.4	81.8	831.5	243.7	88.9	775.2	227.2	94.8
53079-S	35	1.7	778	228	70.4	730.6	214.1	78.3	682.6	200.1	86.6	635.3	186.2	94.5
	40	4.4	862	252.7	72.5	809.9	237.4	80.5	757.5	222	88.8	705.9	206.9	96.5
	45	7.2	952.1	279	74.7	895	262.3	82.9	837.8	245.6	91.1	781.7	229.1	98.6
	50	10	1048.2	307.2	77.2	985.9	289	85.4	923.7	270.7	93.5	862.7	252.9	100.8
53084-S	35	1.7	829.3	243.1	77	778.1	228.1	85.6	726.5	212.9	94.6	675.9	198.1	102.9
	40	4.4	917.8	269	79.4	861.7	252.6	88.2	805.5	236.1	97.1	750.6	220	105.2
	45	7.2	1012.2	296.7	82.1	951.1	278.8	91	890.1	260.9	99.8	830.8	243.5	107.6
	50	10	1112.7	326.1	85	1046.3	306.7	93.9	980.5	287.4	102.6	916.6	268.6	110.1
53086-S	35	1.7	854.5	250.4	80.3	801.4	234.9	89.4	748.1	219.3	98.6	695.8	204	107.1
	40	4.4	945.1	277	83	887.1	260	92.1	829.1	243	101.3	772.6	226.4	109.6
	45	7.2	1041.8	305.3	85.8	978.6	286.8	95.1	915.8	268.4	104.2	854.9	250.6	112.2
	50	10	1144.4	335.4	89	1075.9	315.4	98.3	1008.3	295.5	107.2	943.2	276.4	114.9
54095-S	35	1.7	948.1	277.9	88.5	889.9	260.8	98.3	831.4	243.7	108.4	773.7	226.8	117.8
	40	4.4	1050.1	307.8	91.1	986.1	289	101.1	922.1	270.3	111.1	859	251.8	120.2
	45	7.2	1159.3	339.8	94	1089.2	319.2	104	1019.2	298.7	113.9	950.1	278.5	122.7
	50	10	1275.9	374	97.1	1199.3	351.5	107.1	1122.8	329.1	116.8	1047.1	306.9	125.1
54106-S	35	1.7	1045.9	306.6	95	982.1	287.9	105.6	917.5	268.9	116.8	853.9	250.3	127.4
	40	4.4	1158.8	339.6	97.7	1088.6	319.1	108.6	1018.1	298.4	119.8	948.8	278.1	130.1
	45	7.2	1279.6	375	100.8	1202.8	352.5	111.8	1125.9	330	122.9	1050.5	307.9	133
	50	10	1408.4	412.8	104.2	1324.7	388.3	115.3	1241.2	363.8	126.2	1159.3	339.8	135.9
54111-S	35	1.7	1097.2	321.6	101.5	1029.6	301.8	112.9	961.5	281.8	124.7	894.5	262.2	135.8
	40	4.4	1214.5	356	104.7	1140.4	334.3	116.3	1066.1	312.5	128.1	993.4	291.2	138.8
	45	7.2	1339.7	392.7	108.2	1258.9	369	119.9	1178.2	345.3	131.6	1099.6	322.3	142
	50	10	1473	431.7	112	1385.1	406	123.8	1297.9	380.4	135.3	1213.2	355.6	145.3
54118-S	35	1.7	1172.5	343.7	111.7	1099.3	322.2	124.2	1025.8	300.7	136.9	954.1	279.6	148.5
	40	4.4	1296.2	379.9	115.4	1216.2	356.5	128.1	1136.4	333.1	140.7	1059	310.4	152
	45	7.2	1427.8	418.5	119.6	1340.9	393	132.4	1254.8	367.8	144.8	1171.8	343.5	155.7
	50	10	1567.4	459.4	124.1	1473.5	431.9	137	1381.1	404.8	149.1	1292.7	378.9	159.6

Table 3 ends

Computer Print outs for matched ratings with SKM Air Handling Units are available.



You name it.....We cool it

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### CAPACITY RATINGS - 60 Hz

Model ACUV-S	SST		Condenser Entering Air Temperature											
			95°F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
			Total Capacity		PI	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI
	°F	°C	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW
61009-S	35	1.7	86.9	25.5	7.8	81.7	23.9	8.8	76.3	22.4	9.9	71.1	20.8	10.9
	40	4.4	96.4	28.2	8	90.7	26.6	9	84.8	24.9	10.1	79.1	23.2	11.1
	45	7.2	106.5	31.2	8.2	100.3	29.4	9.2	94	27.5	10.3	87.8	25.7	11.3
	50	10	117.3	34.4	8.3	110.5	32.4	9.4	103.7	30.4	10.4	97.1	28.5	11.4
61011-S	35	1.7	110.7	32.5	9.2	104.1	30.5	10.3	97.2	28.5	11.4	90.4	26.5	12.6
	40	4.4	122.6	35.9	9.4	115.3	33.8	10.5	107.8	31.6	11.7	100.5	29.5	12.8
	45	7.2	135.1	39.6	9.7	127.2	37.3	10.8	119.1	34.9	12	111.3	32.6	13.1
	50	10	148.5	43.5	9.9	139.9	41	11.1	131.2	38.4	12.3	122.9	36	13.3
61016-S	35	1.7	148.9	43.7	12.8	140	41	14.2	131	38.4	15.7	122	35.8	17.2
	40	4.4	165.1	48.4	13.1	155.3	45.5	14.6	145.5	42.6	16.1	135.7	39.8	17.6
	45	7.2	182.3	53.4	13.5	171.7	50.3	15	160.9	47.2	16.5	150.4	44.1	17.9
	50	10	200.6	58.8	13.9	189.1	55.4	15.4	177.5	52	16.9	166.1	48.7	18.3
61018-S	35	1.7	178.1	52.2	17.1	167.2	49	18.9	156.2	45.8	20.8	145.4	42.6	22.6
	40	4.4	196.8	57.7	17.6	184.9	54.2	19.5	173	50.7	21.4	161.3	47.3	23.2
	45	7.2	216.8	63.5	18.2	203.9	59.7	20.1	190.9	56	22	178.3	52.3	23.8
	50	10	238.1	69.8	18.9	224.1	65.7	20.8	210.2	61.6	22.7	196.6	57.6	24.3
62018-S	35	1.7	171	50.1	16.2	160.5	47	18.2	149.9	43.9	20.4	139.5	40.9	22.3
	40	4.4	189.4	55.5	16.6	178	52.2	18.7	166.5	48.8	20.8	155.3	45.5	22.7
	45	7.2	209.1	61.3	17	196.6	57.6	19.1	184.2	54	21.2	172.2	50.5	23
	50	10	230	67.4	17.4	216.5	63.5	19.5	203.1	59.5	21.6	190.3	55.8	23.3
62020-S	35	1.7	190.6	55.9	18.2	178.6	52.4	20.4	166.6	48.8	22.6	155	45.4	24.6
	40	4.4	210.6	61.7	18.8	197.6	57.9	21	184.6	54.1	23.1	172.2	50.5	25.1
	45	7.2	231.8	67.9	19.3	217.6	63.8	21.5	203.7	59.7	23.7	190.7	55.9	25.5
	50	10	254.1	74.5	19.9	238.9	70	22.1	224.1	65.7	24.2	210.4	61.7	25.9
62022-S	35	1.7	217.6	63.8	19	204.2	59.8	21.2	190.4	55.8	23.6	177.1	51.9	25.8
	40	4.4	240.5	70.5	19.5	225.9	66.2	21.8	211	61.8	24.1	196.8	57.7	26.3
	45	7.2	264.8	77.6	20.1	248.9	72.9	22.4	232.9	68.3	24.7	217.8	63.8	26.8
	50	10	290.4	85.1	20.7	273.2	80.1	23	256.2	75.1	25.3	240.3	70.4	27.3
62026-S	35	1.7	251.1	73.6	23.3	235.4	69	25.9	219.7	64.4	28.6	204.4	59.9	31.1
	40	4.4	277.4	81.3	24.1	260.3	76.3	26.7	243.3	71.3	29.3	227	66.5	31.7
	45	7.2	305.2	89.5	24.9	286.8	84.1	27.5	268.5	78.7	30.1	251.1	73.6	32.4
	50	10	334.7	98.1	25.7	314.8	92.3	28.4	295.3	86.5	30.9	276.9	81.2	33
62030-S	35	1.7	294.2	86.2	26.2	276.4	81	29	258.3	75.7	32.1	240.5	70.5	35
	40	4.4	325.7	95.5	26.9	306.3	89.8	29.9	286.7	84	32.9	267.4	78.4	35.7
	45	7.2	359.3	105.3	27.8	338.2	99.1	30.7	316.9	92.9	33.7	296.1	86.8	36.5
	50	10	395	115.8	28.7	372	109	31.7	349.1	102.3	34.6	326.8	95.8	37.3
62033-S	35	1.7	322.9	94.6	30.5	303.1	88.8	33.8	283.2	83	37.2	263.6	77.3	40.4
	40	4.4	357	104.6	31.5	335.4	98.3	34.9	313.7	91.9	38.3	292.5	85.7	41.4
	45	7.2	393.2	115.3	32.5	369.8	108.4	36	346.3	101.5	39.3	323.6	94.8	42.3
	50	10	431.8	126.6	33.7	406.4	119.1	37.1	381.2	111.7	40.4	356.8	104.6	43.3
62036-S	35	1.7	350.6	102.8	35	328.9	96.4	38.8	307.2	90	42.6	285.8	83.8	46.1
	40	4.4	387	113.4	36.3	363.3	106.5	40.1	339.7	99.6	43.8	316.7	92.8	47.2
	45	7.2	425.8	124.8	37.6	400.1	117.3	41.4	374.6	109.8	45.1	349.9	102.5	48.4
	50	10	467	136.9	39	439.2	128.7	42.8	411.8	120.7	46.4	385.4	113	49.5
62043-S	35	1.7	429	125.7	38.9	402	117.8	43.5	374.7	109.8	48.2	348.5	102.1	52.5
	40	4.4	473.6	138.8	40.1	444.2	130.2	44.8	414.8	121.6	49.4	387.1	113.4	53.5
	45	7.2	520.7	152.6	41.4	488.9	143.3	46.1	457.5	134.1	50.6	428.3	125.5	54.6
	50	10	570.4	167.2	42.8	536.2	157.2	47.5	502.9	147.4	51.9	472.3	138.4	55.6
62051-S	35	1.7	502.9	147.4	46.5	471.6	138.2	51.8	440.1	129	57.1	409.5	120	62
	40	4.4	555.6	162.9	48	521.6	152.9	53.3	487.5	142.9	58.6	454.7	133.3	63.3
	45	7.2	611.5	179.2	49.6	574.6	168.4	54.9	538	157.7	60.1	503.1	147.5	64.6
	50	10	670.6	196.5	51.3	630.7	184.9	56.6	591.6	173.4	61.7	554.7	162.6	65.9

Table 4

Computer Print outs for matched ratings with SKM Air Handling Units are available.

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### CAPACITY RATINGS - 60 Hz

Model ACUV-S	SST		Condenser Entering Air Temperature											
			95°F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
			Total Capacity	PI		Total Capacity	PI		Total Capacity	PI		Total Capacity	PI	
°F	°C	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	
62058-S	35	1.7	571.2	167.4	55	535.6	157	61	500	146.5	66.9	465.3	136.4	72.3
	40	4.4	630.9	184.9	56.9	592.2	173.6	62.9	553.7	162.3	68.7	516.4	151.4	73.9
	45	7.2	694.3	203.5	58.9	652.4	191.2	64.9	610.9	179.1	70.5	571.1	167.4	75.4
	50	10	761.3	223.1	61.1	716.1	209.9	67	671.7	196.9	72.5	629.3	184.4	77
62063-S	35	1.7	631.1	185	63.4	591.6	173.4	70.2	552.3	161.9	76.9	513.9	150.6	82.9
	40	4.4	696.4	204.1	65.7	653.5	191.5	72.5	610.9	179	79	569.6	167	84.8
	45	7.2	765.8	224.5	68.1	719.3	210.8	74.9	673.4	197.4	81.3	629.3	184.4	86.8
	50	10	839.2	246	70.6	789.1	231.3	77.3	740.1	216.9	83.6	693.1	203.1	88.7
62071-S	35	1.7	703.6	206.2	69.7	660.1	193.5	77.2	616.5	180.7	84.8	573.8	168.2	91.8
	40	4.4	776.8	227.7	72.1	729.3	213.8	79.7	682	199.9	87.3	635.8	186.4	94.1
	45	7.2	854.8	250.6	74.7	803.3	235.4	82.4	752.2	220.5	89.8	702.5	205.9	96.4
	50	10	937.8	274.9	77.4	882.1	258.5	85.1	827.2	242.4	92.4	774.1	226.9	98.6
63076-S	35	1.7	755.5	221.4	69.6	708.6	207.7	77.4	661.2	193.8	85.5	615.2	180.3	92.9
	40	4.4	834.8	244.7	71.8	783.7	229.7	79.7	732.5	214.7	87.7	683.3	200.3	94.8
	45	7.2	918.9	269.3	74.2	863.4	253.1	82.1	808.4	237	89.9	756	221.6	96.8
	50	10	1007.7	295.4	76.7	947.9	277.8	84.7	889.2	260.6	92.3	833.6	244.3	98.8
63085-S	35	1.7	847.8	248.5	84	794.5	232.9	93	741.5	217.3	101.8	690	202.2	109.6
	40	4.4	935.8	274.3	87	877.9	257.3	95.9	820.6	240.5	104.5	765.5	224.4	111.9
	45	7.2	1028.9	301.6	90.1	966.4	283.2	99	904.9	265.2	107.3	846	248	114.3
	50	10	1127.3	330.4	93.5	1060	310.7	102.3	994.3	291.4	110.2	931.8	273.1	116.7
63094-S	35	1.7	934.4	273.9	88	877	257.1	97.6	819.3	240.1	107.5	762.6	223.5	116.6
	40	4.4	1033	302.8	90.9	970.4	284.4	100.6	907.7	266	110.4	846.5	248.1	119.3
	45	7.2	1137.9	333.5	93.9	1069.9	313.6	103.8	1002.1	293.7	113.4	936.3	274.4	122
	50	10	1249.2	366.1	97.3	1175.6	344.6	107.1	1102.8	323.2	116.5	1032.4	302.6	124.7
63100-S	35	1.7	990	290.2	97.1	928.7	272.2	107.6	867.3	254.2	118.1	807.2	236.6	127.8
	40	4.4	1093.3	320.4	100.4	1026.4	300.8	111	959.8	281.3	121.5	894.9	262.3	130.9
	45	7.2	1203.2	352.7	104	1130.7	331.4	114.6	1058.7	310.3	124.9	989.1	289.9	134
	50	10	1319.8	386.8	107.8	1241.5	363.9	118.4	1164.3	341.3	128.4	1089.9	319.5	137
63102-S	35	1.7	1017.3	298.2	101.7	954.1	279.6	112.6	890.9	261.1	123.6	829	243	133.5
	40	4.4	1122.8	329.1	105.3	1053.9	308.9	116.3	985.4	288.8	127.1	918.6	269.2	136.8
	45	7.2	1235.1	362	109.1	1160.4	340.1	120.2	1086.4	318.4	130.8	1014.9	297.5	140
	50	10	1354.3	397	113.2	1273.7	373.3	124.2	1194.3	350.1	134.5	1118	327.7	143.3
64113-S	35	1.7	1140.9	334.4	110.3	1069.8	313.5	122.2	998.6	292.7	134.1	929.3	272.4	144.8
	40	4.4	1260.1	369.3	114.1	1182.8	346.7	126	1105.8	324.1	137.6	1031.4	302.3	147.9
	45	7.2	1386.6	406.4	118.1	1302.8	381.8	130	1220	357.6	141.3	1140.4	334.2	151.1
	50	10	1520.2	445.6	122.4	1429.9	419.1	134.2	1341.3	393.1	145.2	1256.6	368.3	154.2
64126-S	35	1.7	1255.3	367.9	118.8	1178.1	345.3	131.8	1100.5	322.6	145.1	1024.3	300.2	157.4
	40	4.4	1387.5	406.7	122.7	1303.3	382	135.9	1219	357.3	149	1136.8	333.2	161
	45	7.2	1528.2	447.9	126.9	1436.7	421.1	140.1	1345.7	394.4	153.1	1257.3	368.5	164.6
	50	10	1677.6	491.7	131.4	1578.6	462.7	144.6	1480.7	434	157.3	1386.3	406.3	168.3
64132-S	35	1.7	1310.8	384.2	127.9	1229.8	360.4	141.7	1148.5	336.6	155.7	1068.9	313.3	168.6
	40	4.4	1447.7	424.3	132.3	1359.3	398.4	146.3	1271.2	372.6	160.1	1185.2	347.4	172.6
	45	7.2	1593.5	467.1	136.9	1497.5	438.9	151	1402.3	411	164.6	1310.1	384	176.6
	50	10	1748.1	512.4	141.9	1644.5	482	156	1542.3	452	169.2	1443.8	423.2	180.6
64140-S	35	1.7	1392.3	408.1	141.9	1305.5	382.6	157	1218.9	357.2	172	1134.1	332.4	185.6
	40	4.4	1535.9	450.2	147	1441.3	422.5	162.3	1347.4	394.9	177.1	1256	368.1	190.3
	45	7.2	1688.8	495	152.5	1586.3	464.9	167.8	1485	435.2	182.3	1387	406.5	194.9
	50	10	1851.1	542.5	158.2	1740.5	510.1	173.4	1631.9	478.3	187.5	1527.5	447.7	199.4

Table 4 ends

Computer Print outs for matched ratings with SKM Air Handling Units are available.



You name it.....We cool it

# SKM Air Cooled Condensing Units ACUV Series - R134a

## Capacity Control Steps

The Standard Capacity Control Steps are shown below.

ACUV-S		Standard	Number of steps
51008-S	61009-S	100-0	1
51010-S	61011-S	100-0	1
51013-S	61016-S	100-0	1
52015-S	62018-S	100-50-0	2
51016-S	61018-S	100-0	1
52017-S	62020-S	100-56-0	2
52019-S	62022-S	100-50-0	2
52022-S	62026-S	100-58-0	2
52025-S	62030-S	100-50-0	2
52028-S	62033-S	100-54-0	2
52030-S	62036-S	100-50-0	2
52036-S	62043-S	100-75-50-25-0	4
52043-S	62051-S	100-79-50-29-0	4
52048-S	62058-S	100-75-50-25-0	4
52053-S	62063-S	100-77-50-27-0	4
52060-S	62071-S	100-75-50-25-0	4
53064-S	63076-S	100-86-67-53-33-19-0	6
53071-S	63085-S	100-83-67-50-33-17-0	6
53079-S	63094-S	100-85-69-53-34-18-0	6
53084-S	63100-S	100-85-68-53-35-18-0	6
53086-S	63102-S	100-85-68-51-34-17-0	6
54095-S	64113-S	100-88-75-63-50-38-25-13-0	8
54106-S	64126-S	100-88-76-65-51-39-25-14-0	8
54111-S	64132-S	100-89-75-64-51-40-26-13-0	8
54118-S	64140-S	100-88-75-63-50-38-25-13-0	8

Table 5

## Selection Procedure

### Example

The following information should be determined:

1. Required total capacity = 455 Mbh (126 kW)
2. Saturated suction temperature = 50°F (10°C)
3. Condenser entering air temperature = 115°F (46°C)
4. Power Supply (V/PH/Hz) = 380/3/50

Enter capacity ratings from Table 3 at 115°F (46°C) condenser entering air temperature and select model ACUV 52043-S having a cooling capacity of 496.7 Mbh (145.6 kW) at 50°F (10°C) saturated suction temperature, compressor motor power input is 49.8 kW. For further details refer to physical data and specifications sheets.

Capacity ratings are based on sea level operation. Above sea level, apply the following corrections method.

Actual capacity (at level) = Sea level capacity x altitude correction factor (from Table 6).

## Altitude Correction Factors

The unit ratings are based on sea level. Above sea level apply the following correction factors:

Altitude		Capacity Multiplier	Power Multiplier
feet	meter		
0	0	1	1
2000	610	0.99	1.01
4000	1219	0.98	1.02
6000	1829	0.97	1.03
8000	2438	0.96	1.04
10000	3048	0.95	1.05

Table 6



# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### ELECTRICAL DATA

POWER SUPPLY : 380-415V / 3Ph / 50Hz

MODEL ACUV-S	UNIT CHARACTERISTIC			COMPRESSOR				CONDENSER FAN MOTOR	
	MFA	MCA	ICF DOL	Qty	RLA	LRA	QTY	FLA	LRA
51008-S	63	33	154	1	23	145	2	1.1	4.7
51010-S	63	35	184	1	25	175	2	1.1	4.7
51013-S	100	51	232	1	36	215	2	2.1	8.7
52015-S	80	58	179	2	23	145	2	2.1	8.7
51016-S	125	67	287	1	49	270	2	2.1	8.7
52017-S	100	60	209	1+1	25+23	175+145	2	2.1	8.7
52019-S	100	67	223	2	25	175	2	4.3	18.7
52022-S	125	81	263	1+1	36+25	215+175	2	4.3	18.7
52025-S	160	96	278	2	36	215	3	4.3	18.7
52028-S	160	112	333	1+1	49+36	270+215	3	4.3	18.7
52030-S	200	126	347	2	49	270	3	4.3	18.7
52036-S	160	121	277	4	25	175	3	4.3	18.7
52043-S	200	150	333	2+2	36+25	215+175	4	4.3	18.7
52048-S	250	172	355	4	36	215	4	4.3	18.7
52053-S	250	201	423	2+2	49+36	270+215	4	4.3	18.7
52060-S	315	227	449	4	49	270	4	4.3	18.7
53064-S	315	220	402	3+3	36+25	215+175	6	4.3	18.7
53071-S	315	253	435	6	36	215	6	4.3	18.7
53079-S	400	282	503	2+4	49+36	270+215	6	4.3	18.7
53084-S	400	308	529	4+2	49+36	270+215	6	4.3	18.7
53086-S	400	321	542	5+1	49+36	270+215	6	4.3	18.7
54095-S	400	333	516	8	36	215	8	4.3	18.7
54106-S	500	376	597	3+5	49+36	270+215	8	4.3	18.7
54111-S	500	402	623	5+3	49+36	270+215	8	4.3	18.7
54118-S	500	441	662	8	49	270	8	4.3	18.7

Table 7

POWER SUPPLY : 440V / 3Ph / 50Hz

MODEL ACUV-S	UNIT CHARACTERISTIC			COMPRESSOR				CONDENSER FAN MOTOR	
	MFA	MCA	ICF DOL	Qty	RLA	LRA	QTY	FLA	LRA
51008-S	63	33	154	1	23	145	2	1.1	4.3
51010-S	63	35	184	1	25	175	2	1.1	4.3
51013-S	100	51	231	1	36	215	2	1.8	7.9
52015-S	80	57	178	2	23	145	2	1.8	7.9
51016-S	125	67	286	1	49	270	2	1.8	7.9
52017-S	100	60	208	1+1	25+23	175+145	2	1.8	7.9
52019-S	100	65	220	2	25	175	2	3.6	16
52022-S	125	79	260	1+1	36+25	215+175	2	3.6	16
52025-S	160	94	274	2	36	215	3	3.6	16
52028-S	160	110	329	1+1	49+36	270+215	3	3.6	16
52030-S	200	124	342	2	49	270	3	3.6	16
52036-S	160	119	273	4	25	175	3	3.6	16
52043-S	200	147	328	2+2	36+25	215+175	4	3.6	16
52048-S	250	169	350	4	36	215	4	3.6	16
52053-S	250	199	418	2+2	49+36	270+215	4	3.6	16
52060-S	315	225	444	4	49	270	4	3.6	16
53064-S	250	216	396	3+3	36+25	215+175	6	3.6	16
53071-S	315	249	429	6	36	215	6	3.6	16
53079-S	400	278	497	2+4	49+36	270+215	6	3.6	16
53084-S	400	304	523	4+2	49+36	270+215	6	3.6	16
53086-S	400	317	536	5+1	49+36	270+215	6	3.6	16
54095-S	400	328	508	8	36	215	8	3.6	16
54106-S	500	370	589	3+5	49+36	270+215	8	3.6	16
54111-S	500	396	615	5+3	49+36	270+215	8	3.6	16
54118-S	500	435	654	8	49	270	8	3.6	16

Table 8

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### ELECTRICAL DATA

POWER SUPPLY : 380V / 3Ph / 60Hz

MODEL ACUV-S	UNIT CHARACTERISTIC			COMPRESSOR				CONDENSER FAN MOTOR	
	MFA	MCA	ICF DOL	Qty	RLA	LRA	QTY	FLA	LRA
61009-S	80	39	166	1	27	155	2	1.7	5.6
61011-S	80	44	246	1	31	235	2	1.7	5.6
61016-S	125	64	284	1	44	260	2	3.2	12.2
62018-S	100	69	197	2	27	155	2	3.2	12.2
61018-S	160	75	329	1	53	305	2	3.2	12.2
62020-S	125	74	277	1+1	31+27	235+155	2	3.2	12.2
62022-S	125	83	299	2	31	235	2	5.4	27.5
62026-S	160	99	324	1+1	44+31	260+235	2	5.4	27.5
62030-S	160	117	342	2	44	260	3	5.4	27.5
62033-S	200	128	387	1+1	53+44	305+260	3	5.4	27.5
62036-S	200	137	396	2	53	305	3	5.4	27.5
62043-S	200	150	366	4	31	235	3	5.4	27.5
62051-S	250	185	410	2+2	44+31	260+235	4	5.4	27.5
62058-S	315	211	436	4	44	260	4	5.4	27.5
62063-S	315	231	490	2+2	53+44	305+260	4	5.4	27.5
62071-S	315	249	508	4	53	305	4	5.4	27.5
63076-S	315	270	496	3+3	44+31	260+235	6	5.4	27.5
63085-S	400	309	535	6	44	260	6	5.4	27.5
63094-S	400	330	589	2+4	53+44	305+260	6	5.4	27.5
63100-S	400	348	607	4+2	53+44	305+260	6	5.4	27.5
63102-S	500	357	616	5+1	53+44	305+260	6	5.4	27.5
64113-S	500	408	633	8	44	260	8	5.4	27.5
64126-S	500	437	696	3+5	53+44	305+260	8	5.4	27.5
64132-S	630	455	714	5+3	53+44	305+260	8	5.4	27.5
64140-S	630	482	741	8	53	305	8	5.4	27.5

Table 9

POWER SUPPLY : 460V / 3Ph / 60Hz

MODEL ACUV-S	UNIT CHARACTERISTIC			COMPRESSOR				CONDENSER FAN MOTOR	
	MFA	MCA	ICF DOL	Qty	RLA	LRA	QTY	FLA	LRA
61009-S	63	34	158	1	23	145	2	1.7	6.6
61011-S	63	37	188	1	25	175	2	1.7	6.6
61016-S	100	52	244	1	36	215	2	2.6	14.4
62018-S	80	59	185	2	23	145	2	2.6	14.4
61018-S	125	68	299	1	49	270	2	2.6	14.4
62020-S	100	61	215	1+1	25+23	175+145	2	2.6	14.4
62022-S	100	68	237	2	25	175	2	5	31.5
62026-S	125	82	277	1+1	36+25	215+175	2	5	31.5
62030-S	160	98	293	2	36	215	3	5	31.5
62033-S	200	114	348	1+1	49+36	270+215	3	5	31.5
62036-S	200	128	361	2	49	270	3	5	31.5
62043-S	160	123	292	4	25	175	3	5	31.5
62051-S	200	153	348	2+2	36+25	215+175	4	5	31.5
62058-S	250	175	370	4	36	215	4	5	31.5
62063-S	315	204	438	2+2	49+36	270+215	4	5	31.5
62071-S	315	230	464	4	49	270	4	5	31.5
63076-S	315	224	419	3+3	36+25	215+175	6	5	31.5
63085-S	315	257	452	6	36	215	6	5	31.5
63094-S	400	286	520	2+4	49+36	270+215	6	5	31.5
63100-S	400	312	546	4+2	49+36	270+215	6	5	31.5
63102-S	400	325	559	5+1	49+36	270+215	6	5	31.5
64113-S	400	339	534	8	36	215	8	5	31.5
64126-S	500	381	615	3+5	49+36	270+215	8	5	31.5
64132-S	500	407	641	5+3	49+36	270+215	8	5	31.5
64140-S	500	446	680	8	49	270	8	5	31.5

Table 10



# SKM Air Cooled Condensing Units ACUV Series - R134a

## ELECTRICAL DATA

POWER SUPPLY : 220V / 3Ph / 60Hz

MODEL ACUV-S	UNIT CHARACTERISTIC			COMPRESSOR				CONDENSER FAN MOTOR	
	MFA	MCA	ICF DOL	Qty	RLA	LRA	QTY	FLA	LRA
61009-S	125	65	274	1	46	255	2	2.9	9.7
61011-S	160	75	399	1	54	380	2	2.9	9.7
61016-S	200	109	502	1	78	460	2	4.8	21.2
62018-S	160	115	327	2	46	255	2	4.8	21.2
61018-S	250	128	602	1	93	560	2	4.8	21.2
62020-S	200	125	452	1+1	54+46	380+255	2	4.8	21.2
62022-S	200	142	491	2	54	380	2	9.4	47.6
62026-S	250	172	571	1+1	78+54	460+380	2	9.4	47.6
62030-S	315	206	604	2	78	460	3	9.4	47.6
62033-S	315	224	704	1+1	93+78	560+460	3	9.4	47.6
62036-S	400	239	719	2	93	560	3	9.4	47.6
62043-S	400	260	608	4	54	380	3	9.4	47.6
62051-S	400	323	722	2+2	78+54	460+380	4	9.4	47.6
62058-S	500	371	770	4	78	460	4	9.4	47.6
62063-S	500	405	885	2+2	93+78	560+460	4	9.4	47.6
62071-S	630	435	915	4	93	560	4	9.4	47.6
63076-S	630	474	873	3+3	78+54	460+380	6	9.4	47.6
63085-S	630	546	945	6	78	460	6	9.4	47.6
63094-S	800	580	1060	2+4	93+78	560+460	6	9.4	47.6
63100-S	800	610	1090	4+2	93+78	560+460	6	9.4	47.6
63102-S	800	625	1105	5+1	93+78	560+460	6	9.4	47.6
64113-S	800	721	1119	8	78	460	8	9.4	47.6
64126-S	1000	769	1249	3+5	93+78	560+460	8	9.4	47.6
64132-S	1000	799	1279	5+3	93+78	560+460	8	9.4	47.6
64140-S	1000	844	1324	8	93	560	8	9.4	47.6

Table 11

Voltage imbalance between phases to be < 2%

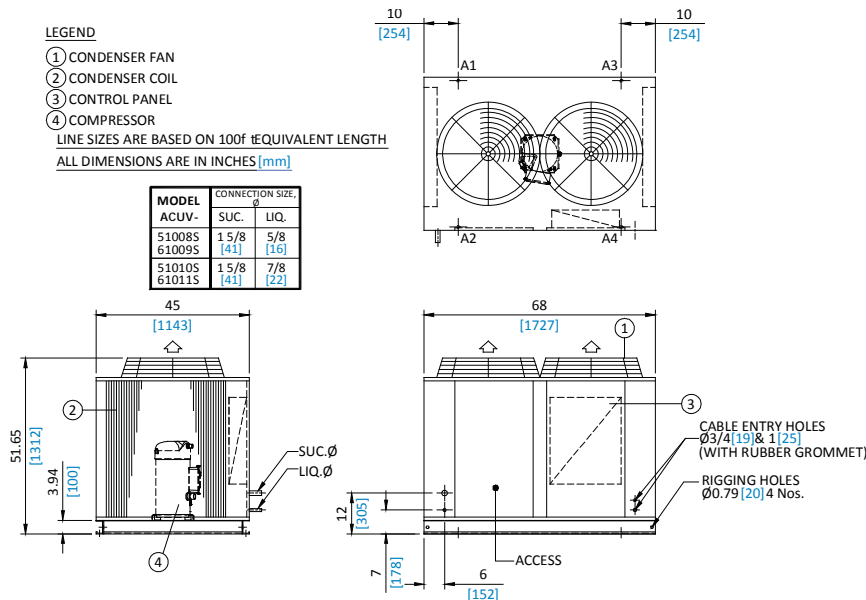
### LEGEND :

**MFA** Maximum Fuse Ampere  
**MCA** Minimum Circuit Ampere ( for wire sizing ). Complies with NEC Article 430.24  
**RLA** Rated Load Ampere

**ICF** Instantaneous Current Flow  
**DOL** Direct On Line Start  
**LRA** Locked Rotor Ampere (DOL)  
**FLA** Full Load Ampere

## Dimensional Data

### ACUV Models: 51008S-51010S & 61009S-61011S



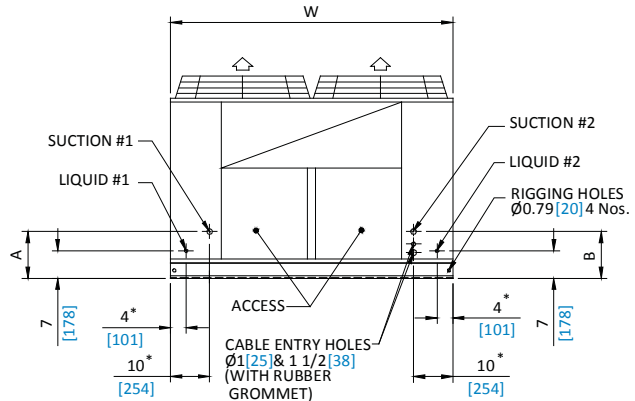
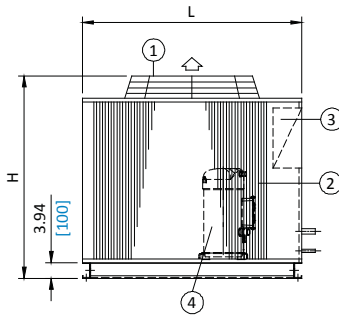
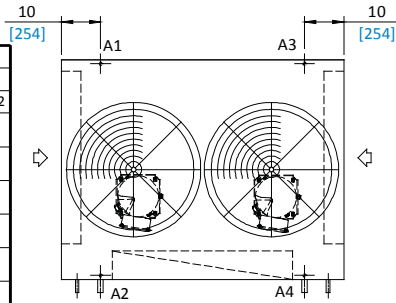
# SKM Air Cooled Condensing Units ACUV Series - R134a

## Dimensional Data

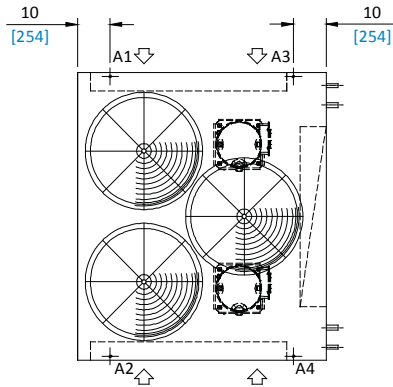
ACUV Models: 51013S-52022S & 61016S-62026S

MODEL ACUV-	DIMENSIONS					CONNECTION SIZE, Ø			
	L	W	H	A	B	CIRCUIT-1		CIRCUIT-2	
						SUC.#1	LIQ.#1	SUC.#2	LIQ.#2
*51013S 61016S	56 [1422]	74 [1880]	51.65 [1312]	12.72 [323]	-	2 1/8 [54]	7/8 [22]	-	-
52015S 62018S	56 [1422]	74 [1880]	51.65 [1312]	12 [305]	12 [305]	1 5/8 [41]	5/8 [16]	1 5/8 [41]	5/8 [16]
*51016S 61018S	56 [1422]	76 [1930]	51.65 [1312]	12.72 [323]	-	2 1/8 [54]	7/8 [22]	-	-
52017S 62020S	56 [1422]	76 [1930]	51.65 [1312]	12 [305]	12 [305]	1 5/8 [41]	7/8 [22]	1 5/8 [41]	5/8 [16]
52019S 62022S	56 [1422]	84 [2134]	59.65 [1515]	12 [305]	12 [305]	1 5/8 [41]	7/8 [22]	1 5/8 [41]	7/8 [22]
52022S 62026S	58 [1473]	84 [2134]	59.65 [1515]	12.72 [323]	12 [305]	2 1/8 [54]	7/8 [22]	1 5/8 [41]	7/8 [22]

\* MODEL WITH ONE COMPRESSOR  
DIM.12" INSTEAD OF 10" & 4" FOR ONE COMPRESSOR MODEL  
ALL DIMENSIONS ARE IN INCHES [mm]



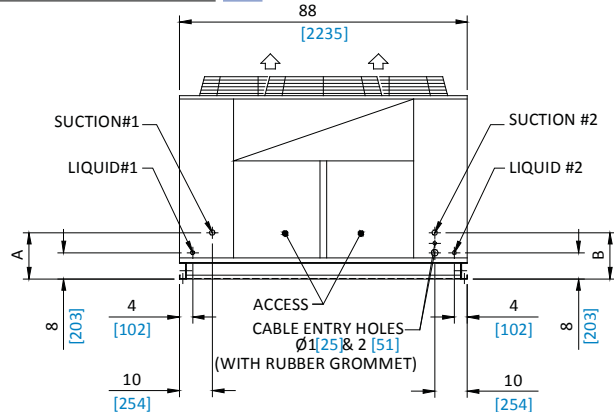
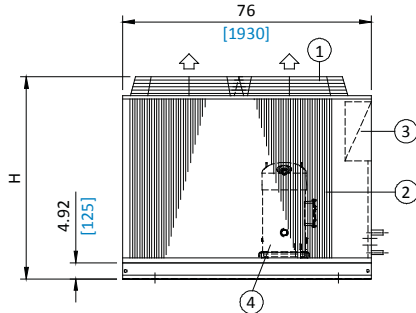
ACUV Models: 52025S-52036S & 62030S- 62043S



MODEL ACUV-	DIMENSIONS			CONNECTION SIZE, Ø			
	H	A	B	CIRCUIT-1		CIRCUIT-2	
				SUC.#1	LIQ.#1	SUC.#2	LIQ.#2
52025S 62030S	60.63 [1540]	13.7 [348]	13.7 [348]	2 1/8 [54]	7/8 [22]	2 1/8 [54]	7/8 [22]
52028S 62033S	60.63 [1540]	13.7 [348]	13.7 [348]	2 1/8 [54]	7/8 [22]	2 1/8 [54]	7/8 [22]
52030S 62036S	60.63 [1540]	13.7 [348]	13.7 [348]	2 1/8 [54]	7/8 [22]	2 1/8 [54]	7/8 [22]
*52036S *62043S	77.63 [1972]	27.29 [693]	27.29 [693]	2 1/8 [54]	7/8 [22]	2 1/8 [54]	7/8 [22]

LEGEND  
① CONDENSER FAN  
② CONDENSER COIL  
③ CONTROL PANEL  
④ COMPRESSOR

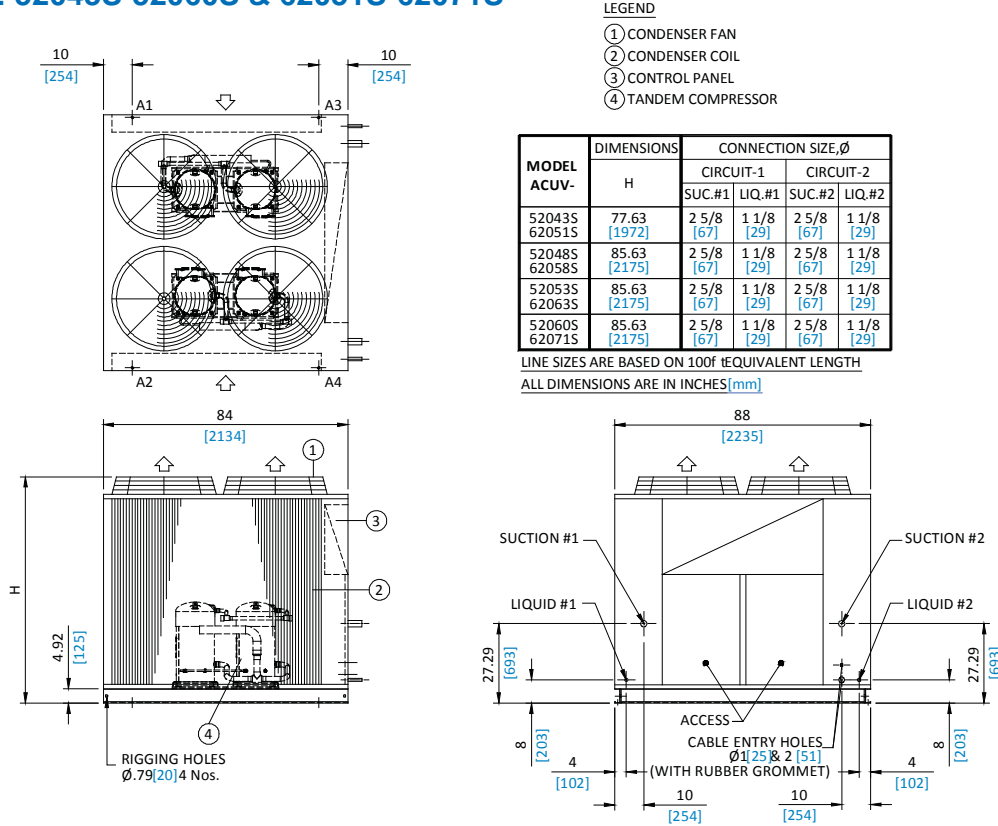
\* MODEL WITH TANDEM COMPRESSOR  
LINE SIZES ARE BASED ON 100F EQUIVALENT LENGTH  
ALL DIMENSIONS ARE IN INCHES [mm]



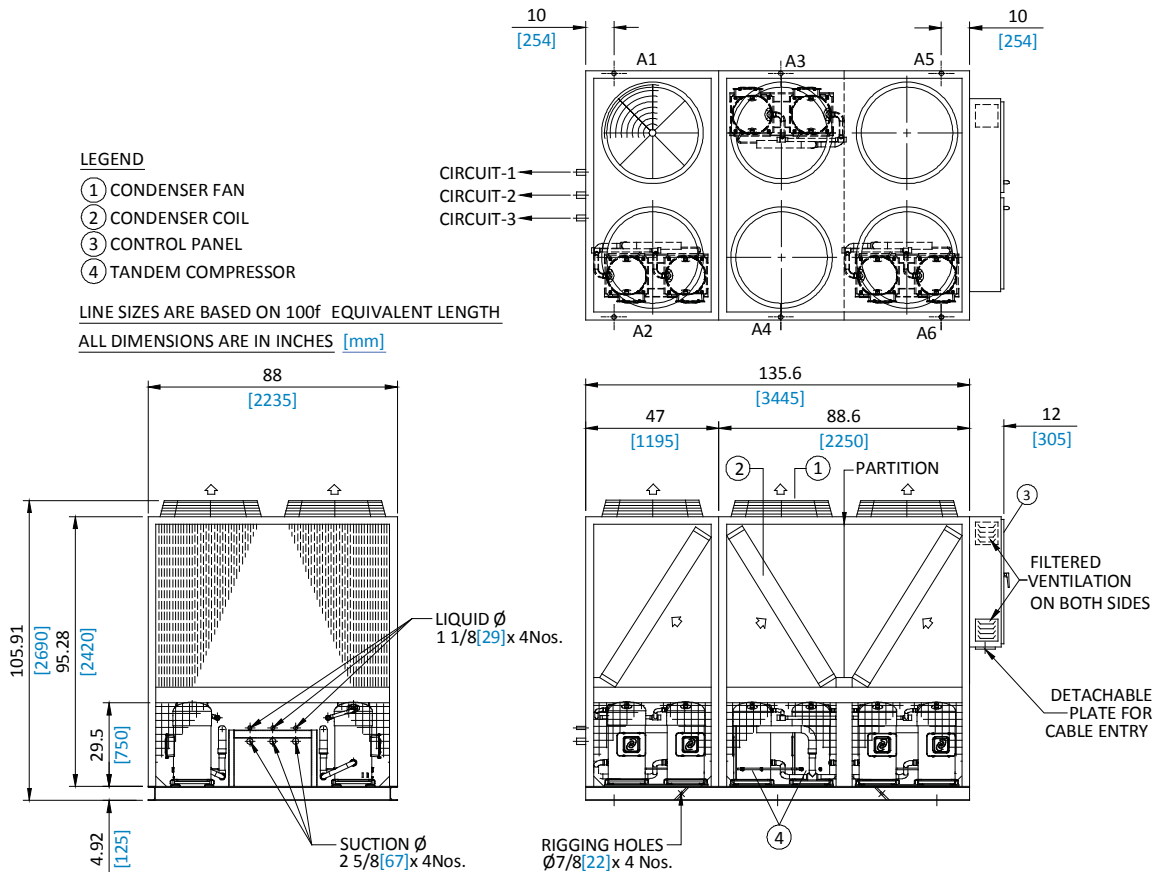
# SKM Air Cooled Condensing Units ACUV Series - R134a

## Dimensional Data

ACUV Models: 52043S-52060S & 62051S-62071S



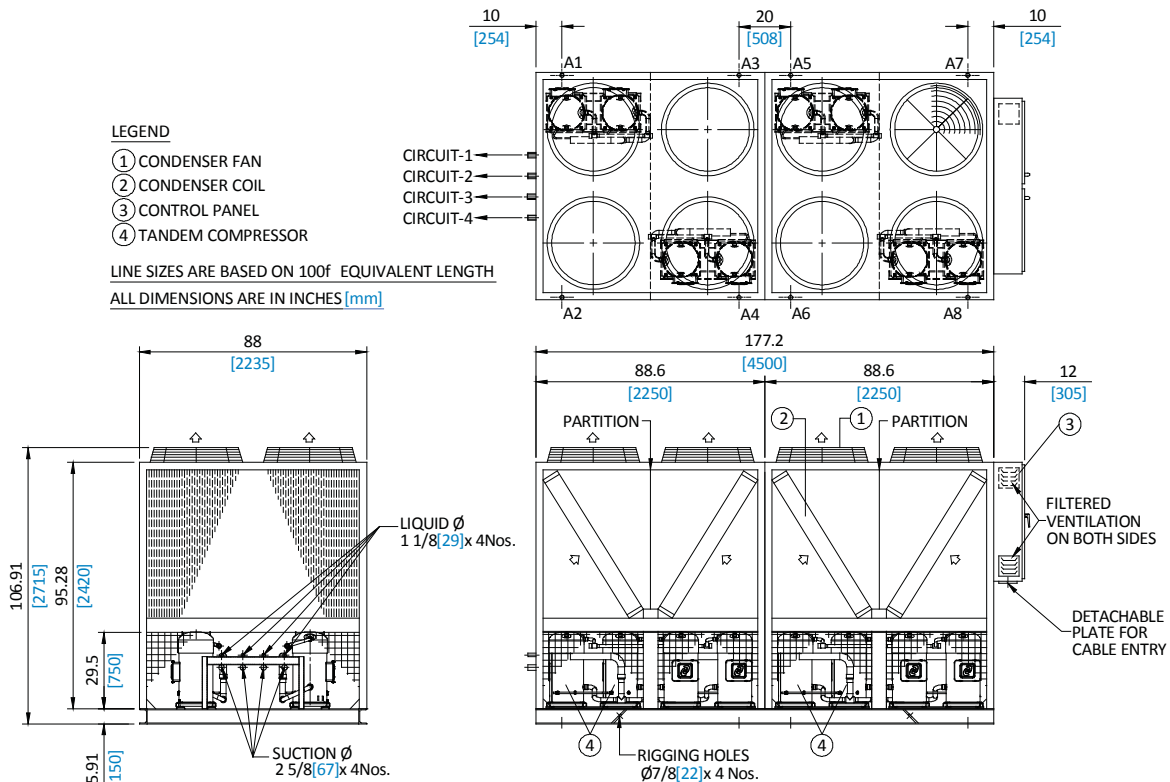
ACUV Models: 53064S-53086S & 63076S-63102S



# SKM Air Cooled Condensing Units ACUV Series - R134a

## Dimensional Data

ACUV Models: 54095S-54118S & 64113S-64140S



## LOADING POINTS - 50Hz

ACUV-	UNIT	LOADING POINTS				TOTAL WEIGHT
		A1	A2	A3	A4	
51008-S	lb.	194	203	194	218	809
	Kg.	88	92	88	99	367
51010-S	lb.	214	223	214	238	889
	Kg.	97	101	97	108	403
51013-S	lb.	265	306	265	306	1142
	Kg.	120	139	120	139	518
52015-S	lb.	254	331	254	331	1169
	Kg.	115	150	115	150	530
51016-S	lb.	265	306	265	306	1142
	Kg.	120	139	120	139	518
52017-S	lb.	265	353	256	340	1213
	Kg.	120	160	116	154	550
52019-S	lb.	284	375	284	375	1319
	Kg.	129	170	129	170	598
52022-S	lb.	326	445	298	395	1464
	Kg.	148	202	135	179	664
52025-S	lb.	366	366	516	516	1764
	Kg.	166	166	234	234	800
52028-S	lb.	366	366	516	516	1764
	Kg.	166	166	234	234	800
52030-S	lb.	366	366	516	516	1764
	Kg.	166	166	234	234	800
52036-S	lb.	406	395	637	624	2062
	Kg.	184	179	289	283	935
52043-S	lb.	706	706	933	933	3277
	Kg.	320	320	423	423	1486
52048-S	lb.	761	761	1032	1032	3585
	Kg.	345	345	468	468	1626
52053-S	lb.	761	761	1032	1032	3585
	Kg.	345	345	468	468	1626
52060-S	lb.	800	800	1107	1107	3815
	Kg.	363	363	502	502	1730

Table 12

## LOADING POINTS - 60Hz

ACUV-	UNIT	LOADING POINTS				TOTAL WEIGHT
		A1	A2	A3	A4	
61009-S	lb.	196	203	196	221	816
	Kg.	89	92	89	100	370
61011-S	lb.	218	223	216	238	895
	Kg.	99	101	98	108	406
61016-S	lb.	265	306	265	306	1142
	Kg.	120	139	120	139	518
62018-S	lb.	254	331	254	331	1169
	Kg.	115	150	115	150	530
61018-S	lb.	265	306	265	306	1142
	Kg.	120	139	120	139	518
62020-S	lb.	265	353	256	340	1213
	Kg.	120	160	116	154	550
62022-S	lb.	284	375	284	375	1319
	Kg.	129	170	129	170	598
62026-S	lb.	326	445	298	395	1464
	Kg.	148	202	135	179	664
62030-S	lb.	366	366	516	516	1764
	Kg.	166	166	234	234	800
62033-S	lb.	366	366	516	516	1764
	Kg.	166	166	234	234	800
62036-S	lb.	366	366	516	516	1764
	Kg.	166	166	234	234	800
62043-S	lb.	415	404	642	631	2090
	Kg.	188	183	291	286	948
62051-S	lb.	706	706	933	933	3277
	Kg.	320	320	423	423	1486
62058-S	lb.	761	761	1032	1032	3585
	Kg.	345	345	468	468	1626
62063-S	lb.	772	772	1041	1041	3625
	Kg.	350	350	472	472	1644
62071-S	lb.	809	809	1116	1116	3850
	Kg.	367	367	506	506	1746

Table 13



# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### LOADING POINTS - 50Hz

ACUV-	UNIT	LOADING POINTS								TOTAL WEIGHT
		A1	A2	A3	A4	A5	A6	A7	A8	
53064-S	lb.	781	1019	1200	1019	942	1180	-	-	6139
	Kg.	354	462	544	462	427	535	-	-	2784
53071-S	lb.	805	1094	1316	1094	968	1257	-	-	6533
	Kg.	365	496	597	496	439	570	-	-	2963
53079-S	lb.	838	1127	1349	1127	999	1288	-	-	6727
	Kg.	380	511	612	511	453	584	-	-	3051
53084-S	lb.	838	1127	1349	1127	999	1288	-	-	6727
	Kg.	380	511	612	511	453	584	-	-	3051
53086-S	lb.	838	1127	1349	1127	999	1288	-	-	6727
	Kg.	380	511	612	511	453	584	-	-	3051
54095-S	lb.	1111	882	875	1116	1111	882	1036	1279	8293
	Kg.	504	400	397	506	504	400	470	580	3761
54106-S	lb.	1144	913	908	1149	1144	913	1069	1310	8551
	Kg.	519	414	412	521	519	414	485	594	3878
54111-S	lb.	1144	913	908	1149	1144	913	1069	1310	8551
	Kg.	519	414	412	521	519	414	485	594	3878
54118-S	lb.	1144	913	908	1149	1144	913	1069	1310	8551
	Kg.	519	414	412	521	519	414	485	594	3878

Table 12 ends

### LOADING POINTS - 60Hz

ACUV-	UNIT	LOADING POINTS								TOTAL WEIGHT
		A1	A2	A3	A4	A5	A6	A7	A8	
63076-S	lb.	781	1019	1200	1019	942	1180	-	-	6139
	Kg.	354	462	544	462	427	535	-	-	2784
63085-S	lb.	805	1094	1316	1094	968	1257	-	-	6533
	Kg.	365	496	597	496	439	570	-	-	2963
63094-S	lb.	849	1136	1358	1136	1010	1299	-	-	6787
	Kg.	385	515	616	515	458	589	-	-	3078
63100-S	lb.	849	1136	1358	1136	1010	1299	-	-	6787
	Kg.	385	515	616	515	458	589	-	-	3078
63102-S	lb.	849	1136	1358	1136	1010	1299	-	-	6787
	Kg.	385	515	616	515	458	589	-	-	3078
64113-S	lb.	1122	891	884	1125	1122	891	1047	1288	8370
	Kg.	509	404	401	510	509	404	475	584	3796
64126-S	lb.	1153	924	917	1158	1153	924	1080	1321	8630
	Kg.	523	419	416	525	523	419	490	599	3914
64132-S	lb.	1153	924	917	1158	1153	924	1080	1321	8630
	Kg.	523	419	416	525	523	419	490	599	3914
64140-S	lb.	1153	924	917	1158	1153	924	1080	1321	8630
	Kg.	523	419	416	525	523	419	490	599	3914

Table 13 ends

# SKM Air Cooled Condensing Units ACUV Series - R134a

## Location and Space Requirements

Due to the vertical air flow discharge condenser design, it is recommended that certain precautions are to be taken before installation. There should be no obstruction on the air flow.

Orient the unit so that prevailing winds blow parallel to the unit length thus minimizing the effects on condensing pressure. If it is not practical to orient the unit in this manner, a wind deflecting shield should be considered.

It is also necessary to provide adequate clearance on all sides of the unit for service access and satisfactory performance. This will prevent excessive condensing temperatures and enhance system performance and operating economy.

A flat concrete foundation or floor which can support the weight of the equipment must be provided as the unit must be level for proper operation and functioning of controls.

Under certain critical conditions it is recommended that vibration isolators of rubber-in-shear or spring type be installed under the base.

The isolators must be designed for the operating weight of the unit. For operating load points refer to Loading Points Data (page No.23 & 24). Correct selection of types of isolators depends upon application and structure.

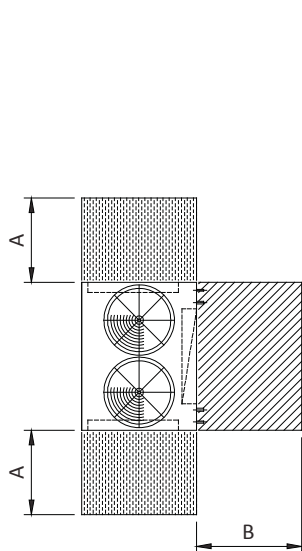
ACUV-S		A	B	C
51008-S	61009-S	40	42	60
51010-S	61011-S		50	
51013-S	61016-S			
52015-S	62018-S			
51016-S	61018-S	48	56	72
52017-S	62020-S		66	
52019-S	62022-S			
52022-S	62026-S			
52025-S	62030-S	64	78	96
52028-S	62033-S			
52030-S	62036-S			
52036-S	62043-S			
52043-S	62051-S	72	84	108
52048-S	62058-S			
52053-S	62063-S			
52060-S	62071-S			
53064-S	63076-S	84	46	90
53071-S	63085-S			
53079-S	63094-S			
53084-S	63100-S			
53086-S	63102-S			
54095-S	64113-S			
54106-S	64126-S			
54111-S	64132-S			
54118-S	64140-S			

Table 14

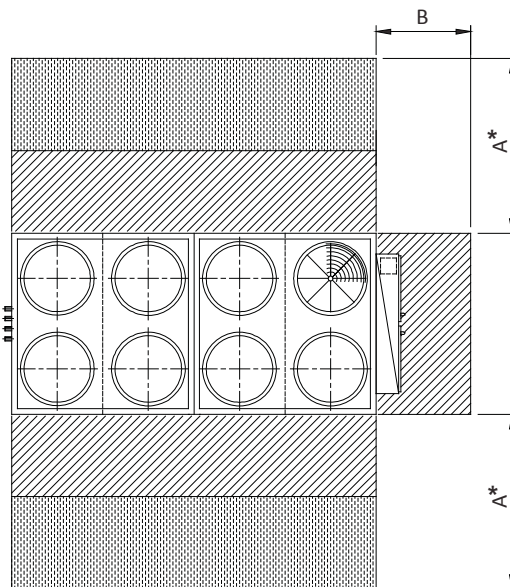
## Single Unit Installation

 SPACING FOR AIR FLOW

 SPACING FOR SERVICE AND ACCESS



ACUV-51008S to 52060S  
ACUV-61009S to 62071S



ACUV-53064S to 54118S  
ACUV-63076S to 64140S

\* SPACING FOR AIRFLOW & SERVICE

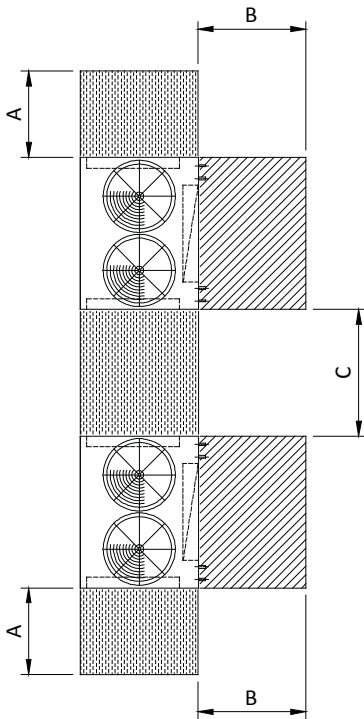


# SKM Air Cooled Condensing Units ACUV Series - R134a

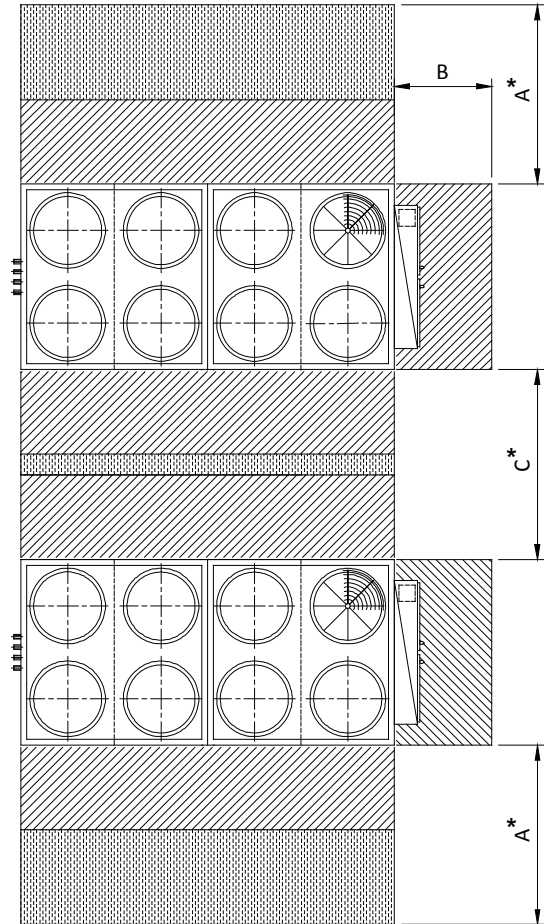
## Multiple Units Installation

 SPACING FOR AIR FLOW

 SPACING FOR SERVICE AND ACCESS



ACUV-51008S to 52060S  
ACUV-61009S to 62071S



ACUV-53064S to 54118S  
ACUV-63076S to 64140S

\* SPACING FOR AIRFLOW & SERVICE

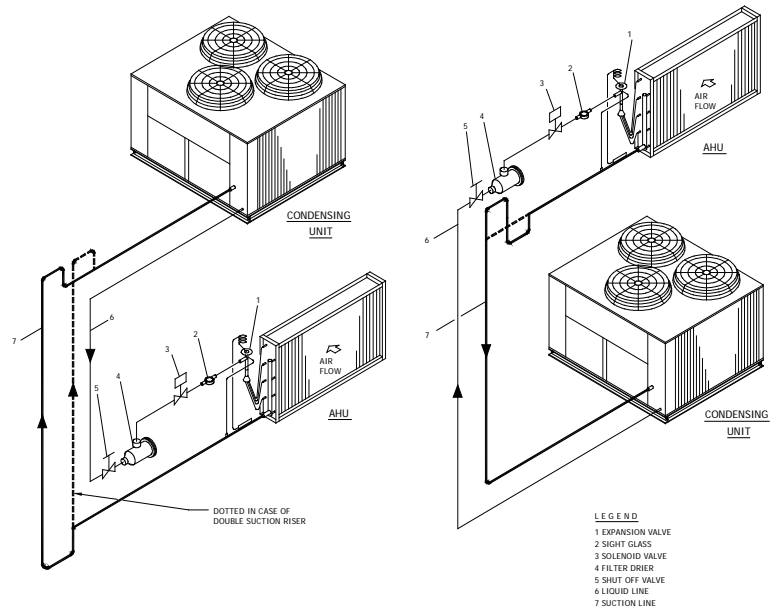
# SKM Air Cooled Condensing Units ACUV Series - R134a

## Typical Refrigeration Piping

### Legend

1. Expansion Valve
2. Sight Glass
3. Solenoid Valve
4. Filter Drier
5. Shut Off Valve
6. Liquid Line
7. Suction Line

**Single Circuit Unit Shown. For Dual circuit units, piping of second circuit is similar.**



## Refrigerant Piping

Correct design and size of refrigerant piping is necessary for proper operation. The refrigerant piping generally should be designed to accomplish the following:

- a. To ensure proper refrigerant feed to the evaporator.
- b. To provide practical refrigerant line sizes without excessive pressure drop.
- c. To maintain uniform return of lubricating oil to the compressor.
- d. To prevent refrigerant from entering the compressor and causing compressor damage due to "slugging".

## Field Expansion Valve Selection

The following recommendations should be taken into consideration when selecting expansion valves in field.

1. Expansion valves should be installed as close to the evaporator as possible, mounted directly to the distributor.
2. The following possible sources of pressure drop to be considered:
  - a. Friction losses through refrigerant lines.
  - b. Pressure drop across valves and controls.
  - c. Pressure drop due to vertical lift of liquid line for R-134a 1°F (0.55°C) sub cooling must be allowed for each 5.5 ft (1.7m) vertical rise in order to avoid flash gas forming due to the weight of the column of liquid refrigerant.

SKM ACUV Series units are designed with a sub cooling circuit enough to sub cool the liquid 12°F (6.6 °C), which gives the liquid maximum 66 ft. (20m) lift without additional sub cooling. Liquid suction heat exchanger can be used for additional sub cooling in order to avoid flash gas forming.

## Matching DX Coil Selection

For single circuit ACUV Series, the DX coil selection in a MAH or other air handler from SKM should be based on total capacity. For dual circuit ACUV Series, extra care should be exercised and correspondingly split, by face area or number of rows to correspond and match the capacity split available in the dual circuited ACUV Series selected. For optimum matching the DX coil should be ordered from SKM as well.

SKM provides correct no. of feeds and circuits and properly sized distribution to ensure the correct split on the DX coil is made available to match the particular selected ACUV Series model.

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### Recommended Refrigerant Line Sizes - 50 Hz

Model ACUV	Liquid Line, Inches																Suction Line, Inches																		
	Circuit 1				Circuit 2				Circuit 3				Circuit 4				Circuit 1				Circuit 2				Circuit 3				Circuit 4						
	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft
51008-S	5/8	5/8	5/8	5/8	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51010-S	5/8	5/8	5/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51013-S	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 5/8	1 5/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
52015-S	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	
51016-S	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 5/8	1 5/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
52017-S	5/8	5/8	5/8	5/8	5/8	5/8	5/8	7/8	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-		
52019-S	5/8	5/8	5/8	7/8	5/8	5/8	5/8	7/8	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	
52022-S	5/8	7/8	7/8	7/8	5/8	5/8	5/8	7/8	-	-	-	-	-	-	-	1 3/8	1 5/8	1 5/8	2 1/8	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	
52025-S	5/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	1 3/8	1 5/8	1 5/8	2 1/8	1 3/8	1 5/8	1 5/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	
52028-S	5/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	1 3/8	1 5/8	1 5/8	2 1/8	1 5/8	1 5/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	
52030-S	5/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	1 5/8	1 5/8	2 1/8	2 1/8	1 5/8	1 5/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	
52036-S	5/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	1 5/8	2 1/8	2 1/8	2 1/8	1 5/8	2 1/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	
52043-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	-	-	-	-	1 5/8	2 1/8	2 1/8	2 5/8	1 5/8	2 1/8	2 1/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	
52048-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	
52053-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	
52060-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	
53064-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	1 5/8	2 1/8	2 1/8	2 5/8	1 5/8	2 1/8	2 1/8	2 5/8	1 5/8	2 1/8	2 1/8	2 5/8	1 5/8	2 1/8	2 1/8	2 5/8	-	-	-	-
53071-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	-	-	-	-
53079-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	-	-	-	-
53084-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	1 1/8	1 1/8	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-	
53086-S	7/8	7/8	7/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-
54095-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 5/8
54106-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 5/8
54111-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	1 1/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	2 1/8	2 5/8	
54118-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8

Table 15

SKM ACUV Series Condensing Units are designed for satisfactory operation with single suction line.

1. Suction Line sizing selection recommendation in Table 15 & 16 is based on 2°F temperature drop.
2. Double suction risers, for applications with systems having large variations in capacity, are recommended to ensure proper oil flow up and return to compressor.
3. Liquid line sizing selection recommendation in table 15 & 16 is based on 2°F temperature drop.
4. Recommended line sizes in Table 15 & 16 are for guidance only. For detailed proper piping, consult recognized piping references like ASHRAE Guide and Data Book for assistance.
5. Equivalent suction and liquid line lengths are shown in table 15 & 16.

**SKM is not responsible for faulty or improper design or sizing of refrigerant lines. The above recommendations do not incorporate necessary slopes, etc. that may be required on horizontal risers, etc.**

# SKM Air Cooled Condensing Units

## ACUV Series - R134a

### Recommended Refrigerant Line Sizes - 60 Hz

Model ACUV	Liquid Line, Inches																Suction Line, Inches																											
	Circuit 1				Circuit 2				Circuit 3				Circuit 4				Circuit 1				Circuit 2				Circuit 3				Circuit 4															
	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft	25ft	50ft	75ft	100ft								
61009-S	5/8	5/8	5/8	5/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
61011-S	5/8	5/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 5/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
61016-S	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 5/8	1 5/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
62018-S	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	1 3/8	1 3/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-					
61018-S	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 5/8	2 1/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
62020-S	5/8	5/8	5/8	5/8	5/8	5/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 3/8	1 5/8	1 5/8	1 3/8	1 5/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-					
62022-S	5/8	5/8	7/8	7/8	5/8	5/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 3/8	1 5/8	1 5/8	1 5/8	1 3/8	1 5/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-					
62026-S	5/8	7/8	7/8	7/8	5/8	5/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 5/8	1 5/8	2 1/8	2 1/8	1 3/8	1 5/8	1 5/8	1 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62030-S	5/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 5/8	1 5/8	2 1/8	2 1/8	1 5/8	1 5/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62033-S	5/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 5/8	1 5/8	2 1/8	2 1/8	1 5/8	2 1/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62036-S	5/8	7/8	7/8	7/8	5/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 5/8	2 1/8	2 1/8	2 1/8	1 5/8	2 1/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62043-S	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	-	-	-	-	-	-	-	-	-	-	-	1 5/8	2 1/8	2 1/8	2 1/8	1 5/8	2 1/8	2 1/8	2 1/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62051-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	-	-	-	-	-	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62058-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	-	-	-	-	-	-	-	-	-	-	-	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62063-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	-	-	-	-	-	-	-	-	-	-	-	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
62071-S	7/8	1 1/8	1 1/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8	-	-	-	-	-	-	-	-	-	-	-	2 1/8	2 5/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 5/8	-	-	-	-	-	-	-	-	-	-	-	-	-				
63076-S	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	7/8	7/8	7/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 1/8	2 1/8	2 5/8	2 1/8	2 1/8	2 5/8	-	-	-	-	-	-			
63085-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-	-	-		
63094-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-	-	-		
63100-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	-	-	-	-	-	-		
63102-S	7/8	7/8	1 1/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8	-	-	-	-	-	-	-	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 5/8	-	-	-	-	-	-		
64113-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8
64126-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8
64132-S	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8	2 1/8	2 1/8	2 5/8	2 5/8
64140-S	7/8	1 1/8	1 1/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8	7/8	1 1/8	1 1/8	1 1/8	7/8	7/8	1 1/8	1 1/8	2 1/8	2 5/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8	2 1/8	2 5/8	2 5/8

Table 16

SKM ACUV Series Condensing Units are designed for satisfactory operation with single suction line.

1. Suction Line sizing selection recommendation in Table 15 & 16 is based on 2°F temperature drop.
2. Double suction risers, for applications with systems having large variations in capacity, are recommended to ensure proper oil flow up and return to compressor.
3. Liquid line sizing selection recommendation in table 15 & 16 is based on 2°F temperature drop.
4. Recommended line sizes in Table 15 & 16 are for guidance only. For detailed proper piping, consult recognized piping references like ASHRAE Guide and Data Book for assistance.
5. Equivalent suction and liquid line lengths are shown in table 15 & 16.

**SKM is not responsible for faulty or improper design or sizing of refrigerant lines. The above recommendations do not incorporate necessary slopes, etc. that may be required on horizontal risers, etc.**



# SKM Air Cooled Condensing Units ACUV Series - R134a

## GUIDE SPECIFICATIONS

### GENERAL FEATURES

Condensing units shall be composed of compressor(s), fan(s), Coil(s), refrigerant piping, electrical components & enclosing cabinet in one piece.

Unit shall be factory assembled, internally wired, piping connections terminated with sealed and soldered copper pipe ends. Unit shall be shipped with nitrogen holding charge (actual charging with refrigerant R-134a should be done at site). Unit shall be capable to operate from 50°F (10°C) to 125°F (52°C) ambient temperature and shall be rated in accordance with AHRI-365 standard.

### COIL(S)

Coil shall be air cooled with integral sub-cooling circuit, constructed of seamless copper tubes 3/8" OD mechanically bonded to wavy Aluminium (Copper) fins with maximum 14 FPI (1.8mm) spacing. Coil shall be tested against leakage by pressurizing air at 450 psig (3100 kPa) in coil, under water, cleaned and dehydrated at the factory.

### COMPRESSOR(S)

Compressor shall be hermetic scroll, refrigerant gas cooled furnished with internal overload protection device, internal pressure relief valve, crankcase heater, and shall be mounted on rubber isolators. These compressors conform to internationally recognized standards like, CE & UL.

### CONDENSER FAN(S) & MOTOR(S)

The machine shall be furnished with direct driven propeller type discharging air upward condenser fans. Fans shall be constructed of corrosion resistant blades such as heavy gauge aluminum. The fan and drive shall be held in proper alignment. Fan assemblies shall be provided with heavy gauge, rust resistant steel wire fan guard. All condenser fans shall be individually, statically, and dynamically balanced for vibration free operation.

Motors shall be Totally Enclosed Air Over (TEAO), 6 poles, with class 'F' insulation, minimum IP-55 protection and factory wired to unit control panel.

### REFRIGERANT PIPING

The refrigerant circuit piping shall be fabricated from ACR grade copper piping, with 1, 2, 3, or 4 refrigeration circuits. The piping connections shall be terminated with sealed & soldered copper pipe ends, which give much simplicity & ease to the installation.

### CASING

Unit casing shall be made of zinc coated galvanized steel sheets conforming to JIS-G3302 and ASTM A653 which shall be phosphatized and then electrostatically dry powder coated of approx. 60 microns to provide an extremely tough, scratch resistance, excellent anti-corrosive protection that can pass 1000 hrs in 5% salt spray testing at 95°F (35°C) and 95% relative humidity as per ASTM B117.

Unit casing shall be provided with access panels for easy service and maintenance of all units parts.

### CONTROL PANEL

The unit mounted IP-54 control panel enclosure shall comprise all starting, operating, and safety controls. Control panels shall be with either dead front panel cover screwed onto the enclosure or with external panels with hinged door and key fastener provided for access and security.

All wiring shall be sized as per NEC regulations. Wiring shall be fully ferruled enabling ease of proper identification. The control panel shall be factory wired for 220-240V/1PH/50 & 60Hz control power supply.

### MICRO PROCESSOR

Unit with an intelligent and compact electronic controller shall be provided in the control panel to control the operation of the unit.

The controller shall have a maximum 24 digital inputs, 8 analog inputs, 16 digital outputs and 2 analog outputs.

The panel mounted controller shall provide an automatic control of compressor start/stop, anti-recycling timer and unit alarms. Automatic reset after power failure, Software stored in the memory and programmed set points retained by real time clock. Operator control and monitoring by means of a back-lit display with 4 lines of 12 character. One line display of set points and actual value. Keypad shall include function buttons. A remote mounted Temperature Transmitter shall give the signal to the controller for start or stop the unit.

Upon start-up the controller shall run through self diagnostic check to verify proper operation and sequence loading. The controller shall monitor the input from the room temperature transmitter and output and input points on the controller and maintain proper operation. The unit shall shut down in a troubled mode to prevent unit from damage. Effectuated safeties alarm shall be displayed on the screen by pressing up (Δ) key on the controller.

