

PACU Series Rooftop Packaged Air Conditioners

Range 2 TR to 5.5 TR
(7 kW to 19.3 kW)



Bulletin # 027/2010

Supersedes Bulletin # 027/2003



R-22

SKM Rooftop Packaged Air Conditioners PACU Series - R22

Main Component Features

PACU rooftop package air conditioners incorporate many features and benefits which provides a heavy duty, robust and long lasting residential and small commercial unit's application.

It is combined with high efficiency components to provide an extremely rugged and energy efficient packaged air conditioner that will provide cooling with higher efficiency for a long and extended period of time.

PACU rooftop Packaged Air conditioners are yet another model in the top class range of SKM products which uses the following basic components:

Cabinet Construction

Panels are heavy duty zinc coated galvanized steel, and it uses latest technology electrostatic powder baked finish which ensures a long lasting and durable cabinet. Panel and access doors are also provided for inspection and access for all internal parts. Evaporator section is fully insulated with 1/2" (12mm) fiber glass insulation.

Compressor

Compressors are hermetically sealed reciprocating for PACU models-5025; 5030; 5035; 6025; 6030 & 6035 and hermetically sealed scroll for all other models. It is located on engineered mounts for safe; quiet & vibration free operation. These types of compressor are equipped with internal motor protection & selected based on its reliability and power efficiency.

Condenser

Condenser coils are manufactured from inner grooved copper tubes mechanically bonded to waffle louver aluminum fins to ensure optimum heat transfer. All coils are tested against leakage by air pressure 450psig (3100 kPa) under water. The additional condenser surface provides more cooling using less energy at no additional cost.

Condenser fans are propeller type, upward air discharge with aluminum blades and directly driven by permanently lubricated motors.

Motors are internally protected for overloads and totally enclosed air over (TEAO), six poles with Class F insulation and minimum IP55 protection. The TEAO and Class F insulation features ensure long life and are unique to SKM.

Evaporator

Cooling coils are manufactured from 3/8"OD seamless copper tubes mechanically bonded to aluminum fins to ensure optimum heat transfer.

Evaporator section is fully insulated with fiber glass insulation with corresponding thickness to prevent condensation on the unit casing.

Evaporator fans are centrifugal type with forward curved blades directly driven by electric motors and designed to meet the system air pressure and flow. These fans are statically and dynamically balanced, complete with self aligning, lubricated for life ball bearing which is suitable for continuous operation.

Refrigerant Components

PACU units come with complete factory sized expansion valve, filter drier, and shut off valve.

Control and Safety

Control system includes high and low pressure switch, internal motor protector for compressor and condenser fan motors. Three minutes delay keeps the unit from restarting after shutdown to prevent short cycling.

Filter

One (1") inch thickness cleanable expanded aluminum filter media is available as standard in this unit.

Options and Accessories

Electric Heater (HC@)

Electric heaters are available as an option with "U" shape finned tubular heating elements with automatic reset thermal safety cut-out.

SDG(High & Low Pressure Gauges)

Unit mounted for each compressor to monitor the high and low operating side.

PACU 50 & 60 hz		NUMBER OF HEATER ELEMENTS
5025	6025	1x1.5
5030	6030	1x1.5 + 1x1.0
5035	6035	1x1.5 + 1x1.5
5048	6048	3 x 1.0
5060	6060	3 x 1.5
5065	6065	3 x 1.5

Table 1



SKM Rooftop Packaged Air Conditioners PACU Series - R22

2" (50mm) Flat Filter Section (FFS)

For heavy filtration need a section can be provided without or with aluminium cleanable filter (2AF).

Liquid Line Sight Glass (RSG)

To monitor refrigerant charge and to provide visual indication of moisture presence in the system.

Extra Shut-Off Valve

To fully isolate refrigerant filter drier; an additional shut-off valve can be incorporated in the liquid line.

Alternative Condenser Coil Material

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

- for copper fins specify (FC)
- for precoated aluminium fins specify (FAP)
- for aluminium fins with aeris coat protection, specify (FAA).

- for copper fins with aeris coat protection, specify (FCA).

Alternative Evaporator Material

- for copper fins specify (FC)
- for precoated aluminium fins specify (FAP)
- for aluminium fins with aeris coat protection, specify (FAA)
- for copper fins with aeris coat protection, specify (FCA)

Condenser Coil Guard (CGP)

Coil wire mesh guard; in galvanized and painted finish for condensers. Recommended on ground level installations where coil needs to be protected against vandalism.

Double Skin Insulation

Inner skin in the evaporator section is provided with no cold bridges.

Voltage Monitoring Module(VMM)

Provide protection to the PACU –series in the event of:

- Phase burn out
- Phase reversal
- Under/over voltage on the incoming line voltage.

Voltage Monitoring Modules(DVM)

To meet DEWA regulations modified module with time delay relay. This option is available For Dubai U.A.E. only.

Low Voltage Thermostats (COTS/CHTS)

(1 stage as per model) for wall mounting and for either cooling (COTS) or cooling/heating (CHTS) operation (not required with MCP option)

SKM Rooftop Packaged Air Conditioners PACU Series - R22

ENGINEERING SPECIFICATIONS - 50 HZ

Model PACU		5025	5030	5035	5048	5060	5065		
Cooling Capacity (1)	MBh	25.8	29.5	33.8	45.7	60.6	63.1		
	kW	7.6	8.6	9.8	13.4	17.8	18.5		
Cooling Capacity (2)	MBh	23.3	26.9	30.4	42.2	55.8	58.3		
	kW	6.8	7.9	8.8	12.4	16.3	17.1		
Capacity Steps	%	100-0	100-0	100-0	100-0	100-0	100-0		
Power Supply	V / Ph / Hz	220 - 1 - 50			380/415 - 3 - 50				
Compressor	Type	Hermetic Reciprocating			Hermetic Scroll				
	Quantity	1	1	1	1	1	1		
Condenser	Coil	Type	Waffle louver fins and 3/8"OD Hi-X tubes						
		Face Area	ft ²	12	16	16	16	16	
			m ²	1.1	1.5	1.5	1.5	1.5	
	Fan	Type - Drive	Propeller - Direct Drive						
		Code	460	460	460	560	560	560	
		Qty	1	1	1	1	1	1	
		Air Flow	cfm	1850	1900	1800	3600	3600	3600
	l/s		873	897	849	1699	1699	1699	
	Motor	Size	kW	0.10	0.10	0.10	0.25	0.25	0.25
		Quantity	#	1	1	1	1	1	1
Evaporator	Coil	Type	Cross Wave Fin, And 3/8"OD Plain Tubes						
		Face Area	ft ²	2.3	2.7	3.1	4.3	5.4	5.4
			m ²	0.22	0.25	0.29	0.40	0.50	0.50
	Fan	Type-Drive	Centrifugal - Direct Drive						
		Code	DD-7/7	DD-9/7	DD-9/7	DD-9/9	DDM-9/9	DDM-10/10	
		Blower Qty.	1	1	1	1	1	1	
		Air Flow	cfm	850	1000	1200	1600	2000	2200
	l/s		401	472	566	755	944	1038	
Motor	Size	kW	0.300	0.420	0.420	0.420	0.550	0.550	
Metering Device	Type	Orifice			Expansion valve				
	Qty.	1	1	1	1	1	1		
Refrigerant Operating Charge (R-22)	lbs	4.3	5.1	8.4	8.8	9.2	10.0		
	kg	2.0	2.3	3.8	4.0	4.2	4.5		
Operating Weight Approximate	lbs	384	416	469	508	528	547		
	kg	174	189	213	230	239	248		

Table 2

- Capacity ratings are based on standard AHRI 210/240 & 340/360. Evaporator entering air conditions of 80°F/67°F (27°C/19.5°C) temperature of 95°F (35°C) dry bulb.
- Evaporator entering air conditions of 80°F/67°F (27°C/19.5°C) drybulb/wetbulb and condenser entering air temperature of 115°F (46°C).

Capacity is gross capacity which does not include the effect of evaporator fan motor heat.



SKM Rooftop Packaged Air Conditioners PACU Series - R22

ENGINEERING SPECIFICATIONS - 60 HZ

Model PACU		6025	6030	6035	6048	6060	6065		
Cooling Capacity (1)	MBh	25.8	31.0	38.2	51.4	61.1	64.8		
	kW	7.6	9.1	11.1	15	17.9	19		
Cooling Capacity (2)	MBh	23.1	28.2	34.5	47.6	56.7	59.9		
	kW	6.8	8.3	10.0	13.9	16.6	17.6		
Capacity Steps	%	100-0	100-0	100-0	100-0	100-0	100-0		
Power Supply	V / Ph / Hz	220 - 1 - 60			380 - 3 - 60				
		-			220 - 3 - 60				
Compressor	Type	Hermetic Reciprocating			Hermetic Scroll				
	Quantity	1	1	1	1	1	1		
Condenser	Coil	Type	Waffle louver fins and 3/8"OD Hi-X tubes						
		Face Area	ft ²	12	16	16	16	16	
			m ²	1.1	1.5	1.5	1.5	1.5	
	Fan	Type - Drive	Propeller - Direct Drive						
		Code	460	460	460	560	560	560	
		Qty	1	1	1	1	1	1	
		Air Flow	cfm	2220	2280	2160	4320	4320	4320
	l/s		1048	1076	1019	2039	2039	2039	
	Motor	Size	kW	0.10	0.10	0.10	0.37	0.37	0.37
		Quantity	#	1	1	1	1	1	1
Evaporator	Coil	Type	Cross Wave Fin, And 3/8"OD Plain Tubes						
		Face Area	ft ²	2.3	2.7	3.1	4.3	5.4	5.4
			m ²	0.22	0.25	0.29	0.40	0.50	0.50
	Fan	Type-Drive	Centrifugal - Direct Drive						
		Code	DD-7/7	DD-9/7	DD-9/7	DD-9/9	DDM-9/9	DDM-9/9	
		Blower Qty.	1	1	1	1	1	1	
		Air Flow	cfm	850	1000	1200	1600	2000	2200
	l/s		401	472	566	755	944	1038	
Motor	Type	Totally Enclosed, Class F insulated, IP55 Protected							
	Size	kW	0.300	0.420	0.420	0.420	0.550	0.550	
Metering Device		Type	Orifice			Expansion valve			
		Qty.	1	1	1	1	1	1	
Refrigerant Operating Charge (R-22)		lbs	4.3	5.1	8.4	8.8	9.2	10.0	
		kg	2.0	2.3	3.8	4.0	4.2	4.5	
Operating Weight Approximate		lbs	387	419	471	518	534	552	
		kg	176	190	214	235	242	250	

Table 3

- Capacity ratings are based on standard AHRI 210/240 & 340/360. Evaporator entering air conditions of 80°F/67°F (27°C/19.5°C) temperature of 95°F (35°C) dry bulb.
 - Evaporator entering air conditions of 80°F/67°F (27°C/19.5°C) drybulb/wetbulb and condenser entering air temperature of 115°F (46°C).
- Capacity is gross capacity which does not include the effect of evaporator fan motor heat.

SKM Rooftop Packaged Air Conditioners PACU Series - R22

CAPACITY RATINGS - 50 HZ

Model	AFR cfm vs (BPF)	EWB °F °C		Condenser Entering Air Temperature																			
				95°F (35°C)					105°F (41°C)					115°F (46°C)					125°F (52°C)				
				Total Capacity		Sensible Cap.		PI	Total Capacity		Sensible Cap.		PI	Total Capacity		Sensible Cap.		PI	Total Capacity		Sensible Cap.		PI
				MBh	kW	kW	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW
5025	642	62	16.7	22.4	6.6	19.4	5.7	2.4	21.2	6.2	18.8	5.5	2.6	19.9	5.8	18.3	5.4	2.7	18.7	5.5	17.8	5.2	2.9
	303	67	19.4	24.4	7.2	16.2	4.7	2.5	23.2	6.8	15.7	4.6	2.7	22	6.4	15.2	4.5	2.9	20.8	6.1	14.8	4.3	3.1
	0.17	72	22.2	26.5	7.8	12.9	3.8	2.7	25.3	7.4	12.5	3.7	2.8	24.1	7.1	12.1	3.6	3	23.6	6.9	11.9	3.5	3.2
	850	62	16.7	23.5	6.9	22.4	6.6	2.5	22.3	6.5	21.9	6.4	2.6	21	6.1	21	6.1	2.8	19.7	5.8	19.7	5.8	3
	401	67	19.4	25.8	7.6	18.5	5.4	2.6	24.6	7.2	18	5.3	2.8	23.3	6.8	17.6	5.2	3	22.7	6.7	17.4	5.1	3.1
	0.2	72	22.2	28.2	8.3	14.5	4.3	2.7	27	7.9	14.1	4.1	2.9	25.8	7.6	13.7	4	3.1	25.2	7.4	13.5	4	3.2
	1283	62	16.7	25.1	7.3	25.1	7.3	2.6	23.7	7	23.7	7	2.7	22.4	6.6	22.4	6.6	2.9	21.7	6.4	21.7	6.4	3
	605	67	19.4	27.8	8.1	22.8	6.7	2.7	26.4	7.7	22.3	6.5	2.9	25.1	7.4	21.9	6.4	3.1	24.5	7.2	21.7	6.3	3.2
	0.26	72	22.2	30.6	9	17.4	5.1	2.9	29.3	8.6	16.9	5	3	28	8.2	16.6	4.9	3.2	-	-	-	-	-
5030	749	62	16.7	25.5	7.5	22.3	6.5	2.6	24.2	7.1	21.8	6.4	2.8	22.9	6.7	21.2	6.2	2.9	21.7	6.3	20.7	6.1	3.1
	353	67	19.4	27.9	8.2	18.7	5.5	2.7	26.6	7.8	18.2	5.3	2.9	25.3	7.4	17.7	5.2	3.1	24.1	7.1	17.2	5	3.3
	0.17	72	22.2	30.3	8.9	14.9	4.4	2.8	29	8.5	14.4	4.2	3	27.8	8.1	14	4.1	3.3	26.6	7.8	13.6	4	3.5
	1000	62	16.7	26.9	7.9	26	7.6	2.7	25.6	7.5	25.5	7.5	2.8	24.2	7.1	24.2	7.1	3	22.9	6.7	22.9	6.7	3.2
	472	67	19.4	29.5	8.7	21.4	6.3	2.8	28.2	8.3	21	6.1	3	26.9	7.9	20.5	6	3.2	25.6	7.5	20	5.9	3.4
	0.2	72	22.2	32.2	9.4	16.7	4.9	2.9	30.9	9.1	16.3	4.8	3.1	29.6	8.7	15.9	4.7	3.4	28.4	8.3	15.5	4.5	3.6
	1497	62	16.7	28.6	8.4	28.6	8.4	2.8	27.2	8	27.2	8	2.9	25.7	7.5	25.7	7.5	3.1	24.3	7.1	24.3	7.1	3.3
	706	67	19.4	31.6	9.3	26.3	7.7	2.9	30.2	8.9	25.8	7.6	3.1	28.8	8.4	25.3	7.4	3.3	27.5	8	24.9	7.3	3.6
	0.26	72	22.2	34.6	10.1	19.9	5.8	3	33.2	9.7	19.5	5.7	3.3	-	-	-	-	-	-	-	-	-	-
5035	856	62	16.7	28.7	8.4	25.3	7.4	2.4	27.3	8	24.7	7.2	2.6	25.8	7.6	24.1	7.1	2.7	24.3	7.1	23.5	6.9	3
	404	67	19.4	31.4	9.2	21.1	6.2	2.5	30	8.8	20.6	6	2.7	28.4	8.3	20	5.9	2.9	26.8	7.9	19.4	5.7	3.1
	0.17	72	22.2	34	10	16.8	4.9	2.6	32.4	9.5	16.2	4.8	2.8	30.8	9	15.7	4.6	3	29.1	8.5	15.1	4.4	3.3
	1200	62	16.7	30.5	8.9	30.4	8.9	2.5	29	8.5	29	8.5	2.6	27.4	8	27.4	8	2.8	25.7	7.5	25.7	7.5	3
	566	67	19.4	33.9	9.9	25	7.3	2.5	31.9	9.3	24.3	7.1	2.8	30.4	8.9	23.8	7	2.9	28.4	8.3	23.1	6.8	3.2
	0.21	72	22.2	36.2	10.6	19.2	5.6	2.6	34.5	10.1	18.7	5.5	2.9	32.7	9.6	18.1	5.3	3.1	-	-	-	-	-
	1711	62	16.7	32.1	9.4	32.1	9.4	2.5	30.5	8.9	30.5	8.9	2.7	28.8	8.4	28.8	8.4	2.9	27	7.9	27	7.9	3.1
	807	67	19.4	35.3	10.3	29.8	8.7	2.6	33.5	9.8	29.2	8.6	2.8	31.7	9.3	28.5	8.4	3	29.7	8.7	27.9	8.2	3.3
	0.26	72	22.2	38.2	11.2	22.3	6.5	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5048	1176	62	16.7	39.7	11.6	34.9	10.2	2.9	38.3	11.2	34.3	10.1	3.3	36.7	10.8	33.6	9.9	3.8	35.1	10.3	33	9.7	4.2
	555	67	19.4	43.3	12.7	29.1	8.5	3	41.8	12.2	28.5	8.4	3.4	40.1	11.8	27.9	8.2	3.8	38.4	11.3	27.2	8	4.2
	0.17	72	22.2	46.6	13.7	23	6.8	3.1	45	13.2	22.5	6.6	3.4	43.2	12.7	21.9	6.4	3.9	41.5	12.2	21.3	6.2	4.3
	1600	62	16.7	41.9	12.3	41.1	12.1	3	40.4	11.8	40.4	11.8	3.4	38.6	11.3	38.6	11.3	3.8	36.9	10.8	36.9	10.8	4.2
	755	67	19.4	45.7	13.4	33.7	9.9	3	44.1	12.9	33.1	9.7	3.4	42.2	12.4	32.4	9.5	3.9	40.4	11.8	31.8	9.3	4.3
	0.2	72	22.2	49.3	14.5	26	7.6	3.1	47.5	13.9	25.4	7.5	3.5	45.6	13.4	24.8	7.3	4	43.6	12.8	24.2	7.1	4.4
	2353	62	16.7	44.2	13	44.2	13	3	42.5	12.5	42.5	12.5	3.4	40.6	11.9	40.6	11.9	3.8	38.8	11.4	38.8	11.4	4.2
	1110	67	19.4	48.3	14.2	40.9	12	3.1	46.4	13.6	40.2	11.8	3.5	44.4	13	39.6	11.6	3.9	42.4	12.4	38.9	11.4	4.3
	0.26	72	22.2	52.1	15.3	30.6	9	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5060	1490	62	16.7	52.6	15.4	45.2	13.3	4.3	50.5	14.8	44.3	13	4.9	48.2	14.1	43.3	12.7	5.5	46.2	13.5	42.5	12.4	6.1
	703	67	19.4	57.4	16.8	37.9	11.1	4.4	55.1	16.2	37	10.8	5	52.8	15.5	36.1	10.6	5.6	51.8	15.2	35.7	10.5	5.9
	0.17	72	22.2	61.8	18.1	30.1	8.8	4.5	59.5	17.4	29.3	8.6	5.1	57.2	16.8	28.5	8.4	5.7	56.1	16.4	28.1	8.2	6
	2000	62	16.7	55.6	16.3	52.8	15.5	4.4	53.2	15.6	51.8	15.2	5	50.8	14.9	50.8	14.9	5.6	49.7	14.6	49.7	14.6	5.8
	944	67	19.4	60.6	17.8	43.4	12.7	4.5	58.2	17.1	42.5	12.5	5.1	55.8	16.3	41.6	12.2	5.7	54.6	16	41.2	12.1	5.9
	0.2	72	22.2	65.2	19.1	33.7	9.9	4.6	62.8	18.4	32.9	9.6	5.2	60.3	17.7	32.1	9.4	5.8	59.1	17.3	31.7	9.3	6.1
	2979	62	16.7	58.9	17.3	58.9	17.3	4.5	56.4	16.5	56.4	16.5	5	53.8	15.8	53.8	15.8	5.6	52.6	15.4	52.6	15.4	5.9
	1406	67	19.4	64.3	18.8	52.9	15.5	4.6	61.7	18.1	52	15.2	5.2	59.1	17.3	51.1	15	5.8	57.8	16.9	50.6	14.8	6
	0.26	72	22.2	69	20.2	39.7	11.6	4.7	66.5	19.5	38.9	11.4	5.4	-	-	-	-	-	-	-	-	-	-
5065	1490	62	16.7	54	15.8	45.8	13.4	4.5	51.8	15.2	44.9	13.2	5.2	49.6	14.5	43.9	12.9	5.9	47.5	13.9	43	12.6	6.5
	703	67	19.4	58.7	17.2	38.4	11.3	4.7	56.5	16.6	37.5	11	5.3	54.3	15.9	36.7	10.7	6	53.2	15.6	36.2	10.6	6.3
	0.17	72	22.2	63.2	18.5	30.6	9	4.8	61	17.9	29.8	8.7	5.4	58.7	17.2	29	8.5	6.1	57.6	16.9	28.7	8.4	6.3
	2200	62	16.7	57.9	17	56.2	16.5	4.6	55.5	16.3	55.2	16.2	5.3	53.2	15.6	53.2	15.6	5.9	52	15.2	52	15.2	6.2
	1038	67	19.4	63.1	18.5	46	13.5	4.8	60.7	17.8	45.2	13.2	5.4	58.3	17.1	44.3	13	6.1	57.1	16.7	43.9	12.9	6.3
	0.21	72	22.2	68	19.9	35.6	10.4	4.9	65.5	19.2	34.8	10.2	5.6	62.9	18.4	33.9	10	6.2	61.8	18.1	33.6	9.9	6.4
	2979	62	16.7	60.4	17.7	60.4	17.7	4.7	58	17	58	17	5.4	55.5	16.3	55.5	16.3	6	54.3	15.9	54.3	15.9	6.3
	1406	67	19.4	66	19.3	53.5	15.7	4.9	63.4	18.6	52.6	15.4	5.5	60.8	17.8	51.6	15.1	6.1	59.6	17.5	51.2	15	6.4
	0.26	72	22.2	71.2	20.9	40.4	11.8	5	68.4	20	39.5	11.6	5.7	65.5	19.2	38.6	11.3	6.3	-	-	-	-	-

See Notes on page 8

Table 4



SKM Rooftop Packaged Air Conditioners PACU Series - R22

CAPACITY RATINGS - 60 HZ

Model	AFR		EWB		Condenser Entering Air Temperature																		
	cfm l/s (BPF)	°F			°C	95°F (35°C)					105°F (41°C)					115°F (46°C)					125°F (52°C)		
			Total Capacity			Sensible Cap.		PI	Total Capacity		Sensible Cap.		PI	Total Capacity		Sensible Cap.		PI	Total Capacity		Sensible Cap.		PI
			MBh	kW		kW	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW
6025	642	62	16.7	22.3	6.5	19.3	5.7	2.2	21	6.2	18.8	5.5	2.3	19.7	5.8	18.2	5.3	2.4	18.3	5.4	17.6	5.2	2.5
	303	67	19.4	24.4	7.1	16.2	4.7	2.3	23.1	6.8	15.7	4.6	2.4	21.8	6.4	15.2	4.4	2.6	20.5	6	14.7	4.3	2.7
	0.17	72	22.2	26.4	7.7	12.9	3.8	2.4	25.2	7.4	12.5	3.7	2.5	23.9	7	12.1	3.5	2.7	22.8	6.7	11.7	3.4	2.9
	850	62	16.7	23.5	6.9	22.4	6.6	2.2	22.1	6.5	21.9	6.4	2.4	20.7	6.1	20.7	6.1	2.5	19.4	5.7	19.4	5.7	2.6
	401	67	19.4	25.8	7.6	18.5	5.4	2.4	24.4	7.2	18	5.3	2.5	23.1	6.8	17.5	5.1	2.6	21.9	6.4	17.1	5	2.8
	0.2	72	22.2	28.1	8.2	14.5	4.2	2.5	26.8	7.9	14	4.1	2.6	25.6	7.5	13.7	4	2.8	24.5	7.2	13.3	3.9	3
	1283	62	16.7	25	7.3	25	7.3	2.3	23.6	6.9	23.6	6.9	2.5	22.1	6.5	22.1	6.5	2.6	20.7	6.1	20.7	6.1	2.7
	605	67	19.4	27.6	8.1	22.8	6.7	2.5	26.3	7.7	22.3	6.5	2.6	24.9	7.3	21.8	6.4	2.8	23.7	6.9	21.4	6.3	3
	0.26	72	22.2	30.3	8.9	17.3	5.1	2.6	29	8.5	16.9	4.9	2.8	-	-	-	-	-	-	-	-	-	-
	749	62	16.7	26.8	7.8	22.9	6.7	2.9	25.5	7.5	22.3	6.5	3	24.2	7.1	21.8	6.4	3.2	22.8	6.7	21.2	6.2	3.3
353	67	19.4	29.2	8.6	19.2	5.6	3.1	27.9	8.2	18.7	5.5	3.2	26.6	7.8	18.2	5.3	3.3	25.2	7.4	17.6	5.2	3.5	
0.17	72	22.2	31.6	9.3	15.3	4.5	3.2	30.3	8.9	14.9	4.4	3.3	29	8.5	14.4	4.2	3.5	27.5	8.1	13.9	4.1	3.7	
1000	62	16.7	28.3	8.3	26.6	7.8	3	26.9	7.9	26.1	7.6	3.1	25.5	7.5	25.5	7.5	3.3	24.1	7.1	24.1	7.1	3.4	
472	67	19.4	31	9.1	22	6.4	3.1	29.6	8.7	21.5	6.3	3.3	28.2	8.3	20.9	6.1	3.4	26.7	7.8	20.4	6	3.6	
0.2	72	22.2	33.5	9.8	17.2	5	3.2	32.2	9.4	16.7	4.9	3.4	30.8	9	16.3	4.8	3.6	29.2	8.6	15.8	4.6	3.7	
1497	62	16.7	30.1	8.8	30.1	8.8	3.1	28.6	8.4	28.6	8.4	3.2	27.1	8	27.1	8	3.4	25.5	7.5	25.5	7.5	3.5	
706	67	19.4	33.1	9.7	26.8	7.9	3.2	31.6	9.3	26.3	7.7	3.4	30.1	8.8	25.8	7.6	3.6	28.4	8.3	25.2	7.4	3.8	
0.26	72	22.2	35.9	10.5	20.3	6	3.2	34.5	10.1	19.9	5.8	3.5	33	9.7	19.4	5.7	3.8	-	-	-	-	-	
856	62	16.7	32.2	9.4	26.9	7.9	2.9	30.6	9	26.2	7.7	3.1	29	8.5	25.5	7.5	3.3	27.4	8	24.8	7.3	3.5	
404	67	19.4	35.3	10.3	22.7	6.6	3.1	33.7	9.9	22	6.5	3.3	31.9	9.4	21.3	6.3	3.5	30.3	8.9	20.7	6.1	3.7	
0.17	72	22.2	38.2	11.2	18.3	5.4	3.3	36.5	10.7	17.7	5.2	3.4	34.7	10.2	17	5	3.7	-	-	-	-	-	
1200	62	16.7	34.5	10.1	32	9.4	3.1	32.8	9.6	31.3	9.2	3.3	31	9.1	30.6	9	3.4	29.2	8.6	29.2	8.6	3.6	
566	67	19.4	38.2	11.1	26.7	7.8	3.2	36.1	10.6	25.9	7.6	3.4	34.5	10.1	25.3	7.4	3.6	32.7	9.5811	24.6	7.2078	3.8	
0.21	72	22.2	41.1	12	20.8	6.1	3.4	39.1	11.5	20.2	5.9	3.6	37.1	10.9	19.5	5.7	3.8	35.8	10.4894	19.1	5.5963	4.1	
1711	62	16.7	36.6	10.7	36.6	10.7	3.2	34.7	10.2	34.7	10.2	3.4	32.8	9.6	32.8	9.6	3.5	30.9	9.1	30.9	9.1	3.8	
807	67	19.4	40.3	11.8	31.5	9.2	3.3	38.2	11.2	30.8	9	3.5	36.1	10.6	30.1	8.8	3.7	34.7	10.1671	29.6	8.6728	4	
0.26	72	22.2	43.7	12.8	24.1	7	3.4	41.4	12.1	23.4	6.8	3.7	39.2	11.5	22.7	6.6	4	38.1	11.1633	22.3	6.5339	4.2	
1176	62	16.7	44.5	13	37	10.9	3.5	42.9	12.6	36.3	10.6	3.9	41.2	12.1	35.6	10.4	4.4	39.5	11.6	34.8	10.2	4.9	
555	67	19.4	48.4	14.2	31.1	9.1	3.5	46.7	13.7	30.5	8.9	4	44.9	13.2	29.7	8.7	4.5	43.1	12.6	29	8.5	5	
0.17	72	22.2	52.1	15.3	25	7.3	3.6	50.3	14.7	24.3	7.1	4.1	48.5	14.2	23.7	6.9	4.6	46.6	13.7	23	6.8	5	
1600	62	16.7	47.2	13.8	43.3	12.7	3.5	45.5	13.3	42.6	12.5	4	43.6	12.8	41.8	12.3	4.5	41.7	12.2	41.1	12	4.9	
755	67	19.4	51.4	15.1	35.8	10.5	3.6	49.6	14.5	35.1	10.3	4.1	47.6	14	34.4	10.1	4.5	45.7	13.4	33.7	9.9	5	
0.2	72	22.2	55.3	16.2	28	8.2	3.7	53.4	15.7	27.4	8	4.1	51.4	15.1	26.7	7.8	4.6	49.4	14.5	26	7.6	5.1	
2353	62	16.7	50.1	14.7	50.1	14.7	3.6	48.2	14.1	48.2	14.1	4	46.1	13.5	46.1	13.5	4.5	44.1	12.9	44.1	12.9	5	
1110	67	19.4	54.6	16	43.1	12.6	3.7	52.6	15.4	42.4	12.4	4.1	50.5	14.8	41.6	12.2	4.6	48.4	14.2	40.9	12	5.1	
0.26	72	22.2	58.8	17.2	32.7	9.6	3.8	56.7	16.6	32	9.4	4.2	54.5	16	31.3	9.2	4.7	52.3	15.3	30.7	9	5.2	
1490	62	16.7	52.8	15.5	45.3	13.3	4.3	50.9	14.9	44.5	13	4.8	49	14.4	43.7	12.8	5.3	47.1	13.8	42.8	12.6	5.9	
703	67	19.4	57.6	16.9	38	11.1	4.4	55.7	16.3	37.2	10.9	4.9	53.7	15.7	36.4	10.7	5.5	51.7	15.1	35.6	10.4	6	
0.17	72	22.2	62.3	18.3	30.3	8.9	4.5	60.2	17.7	29.6	8.7	5	58.1	17	28.8	8.5	5.6	56.1	16.4	28.1	8.2	6.1	
2000	62	16.7	55.8	16.4	52.9	15.5	4.3	53.8	15.8	52.1	15.3	4.9	51.7	15.2	51.2	15	5.4	49.6	14.5	49.6	14.5	5.9	
944	67	19.4	61.1	17.9	43.6	12.8	4.5	58.9	17.3	42.8	12.5	5	56.7	16.6	42	12.3	5.6	54.6	16	41.2	12.1	6	
0.2	72	22.2	66	19.4	34	10	4.6	63.8	18.7	33.2	9.7	5.1	61.5	18	32.5	9.5	5.7	59.4	17.4	31.8	9.3	6.2	
2979	62	16.7	59.3	17.4	59.3	17.4	4.4	57.1	16.7	57.1	16.7	4.9	54.8	16	54.8	16	5.5	52.5	15.4	52.5	15.4	6	
1406	67	19.4	65	19.1	53.1	15.6	4.5	62.7	18.4	52.3	15.3	5.1	60.2	17.7	51.5	15.1	5.7	58	17	50.7	14.9	6.1	
0.26	72	22.2	70.4	20.6	40.1	11.8	4.7	67.9	19.9	39.3	11.5	5.3	65.5	19.2	38.6	11.3	5.8	-	-	-	-	-	
1490	62	16.7	55.4	16.2	46.5	13.6	4.6	53.4	15.7	45.6	13.4	5.2	51.3	15	44.7	13.1	5.8	49.2	14.4	43.8	12.8	6.4	
703	67	19.4	60.3	17.7	39	11.4	4.8	58.1	17	38.1	11.2	5.4	55.9	16.4	37.3	10.9	6	53.7	15.8	36.4	10.7	6.5	
0.17	72	22.2	64.8	19	31.2	9.1	4.9	62.5	18.3	30.4	8.9	5.5	60.2	17.6	29.6	8.7	6.1	59.1	17.3	29.2	8.6	6.3	
2200	62	16.7	59.5	17.4	56.9	16.7	4.8	57.3	16.8	55.9	16.4	5.3	54.9	16.1	54.9	16.1	5.9	52.6	15.4	52.6	15.4	6.5	
1038	67	19.4	64.8	19	46.6	13.7	4.9	62.3	18.3	45.8	13.4	5.5	59.9	17.6	44.9	13.1	6.1	58.7	17.2	44.4	13	6.3	
0.21	72	22.2	69.5	20.4	36.1	10.6	5	67.1	19.7	35.3	10.3	5.6	64.7	19	34.5	10.1	6.2	63.7	18.7	34.2	10	6.4	
2979	62	16.7	62.2	18.2	62.2	18.2	4.8	59.7	17.5	59.7	17.5	5.4	57.2	16.8	57.2	16.8	6	54.8	16.1	54.8	16.1	6.5	
1406	67	19.4	67.6	19.8	54	15.8	5	65.1	19.1	53.1	15.6	5.5	62.6	18.3	52.3	15.3	6.1	61.4	18	51.9	15.2	6.4	
0.26	72	22.2	72.5	21.2	40.8	11.9	5.1	70	20.5	40	11.7	5.7	67.8	19.9	39.3	11.5	6.2	66.7	19.6	39	11.4	6.5	

Notes:

1. Ratings are based on 80°F (27°C) DB evaporator entering air temperature.
2. Direct interpolation is permissible. Do not extrapolate.
3. SKM Computer Selections are available for quick and accurate selections..
4. Shaded values are at 120°F (49°C) condenser air entering temperature.

Table 5

SKM Rooftop Packaged Air Conditioners PACU Series - R22

Fan Performance - 50 Hz

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
5025	CMH	1792	1650	1505	1325	950	-	-	-	-	-
	CFM	1055	971	886	780	559	-	-	-	-	-
	LPS	498	458	418	368	264	-	-	-	-	-

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
5030	CMH	2300	2295	2270	2220	2140	2075	2000	1925	1350	-
	CFM	1354	1351	1336	1307	1260	1221	1177	1133	795	-
	LPS	639	638	631	617	594	576	556	535	375	-

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
5035	CMH	2600	2585	2575	2500	2450	2400	2300	2200	2085	1890
	CFM	1530	1521	1516	1471	1442	1413	1354	1295	1227	1112
	LPS	722	718	715	694	681	667	639	611	579	525

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
5048	CMH	2890	2800	2745	2680	2605	2540	2415	1475	1250	-
	CFM	1701	1648	1616	1577	1533	1495	1421	868	736	-
	LPS	803	778	763	744	724	706	671	410	347	-

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
5060	CMH	3600	3565	3405	3300	3185	3010	2815	2700	2400	1800
	CFM	2119	2098	2004	1942	1875	1772	1657	1589	1413	1059
	LPS	1000	990	946	917	885	836	782	750	667	500

BLOWER MOTOR SPEED		EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
5065	CMH	4000	3990	3950	3908	3890	3850	3780	3698	3620	3515
	CFM	2354	2348	2325	2300	2290	2266	2225	2177	2131	2069
	LPS	1111	1108	1097	1086	1081	1069	1050	1027	1006	976

Air Flow values are based on pressure drops through evaporator coil, fan casing and 1" washable flat filter



SKM Rooftop Packaged Air Conditioners PACU Series - R22

Fan Performance - 60 Hz

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
6025	CMH	2082	2000	1930	1869	1750	1614	1465	1200	800	-
	CFM	1225	1177	1136	1100	1030	950	862	706	471	-
	LPS	578	556	536	519	486	448	407	333	222	-

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
6030	CMH	2251	2243	2239	2231	2217	2202	2195	2150	2107	2090
	CFM	1325	1320	1318	1313	1305	1296	1292	1265	1240	1230
	LPS	625	623	622	620	616	612	610	597	585	581

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
6035	CMH	2250	2243	2238	2234	2212	2208	2201	2188	2130	2100
	CFM	1324	1320	1317	1315	1302	1300	1295	1288	1254	1236
	LPS	625	623	622	621	614	613	611	608	592	583

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
6048	CMH	2596	2549	2525	2505	2498	2490	2450	2400	2300	2130
	CFM	1528	1500	1486	1474	1470	1466	1442	1413	1354	1254
	LPS	721	708	701	696	694	692	681	667	639	592

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
6060	CMH	3636	3605	3598	3555	3500	3398	3389	3228	3198	3105
	CFM	2140	2122	2118	2092	2060	2000	1995	1900	1882	1828
	LPS	1010	1001	999	988	972	944	941	897	888	863

MODEL	AFR	EXTERNAL ESTATIC PRESSURE [in.wg.- (Pa)]									
		0.1 (25)	0.2 (50)	0.3 (75)	0.4 (100)	0.5 (125)	0.6 (150)	0.7 (175)	0.8 (200)	0.9 (225)	1.0 (250)
6065	CMH	3653	3628	3602	3534	3435	3398	3305	3236	3185	3102
	CFM	2150	2135	2120	2080	2022	2000	1945	1905	1875	1826
	LPS	1015	1008	1001	982	954	944	918	899	885	862

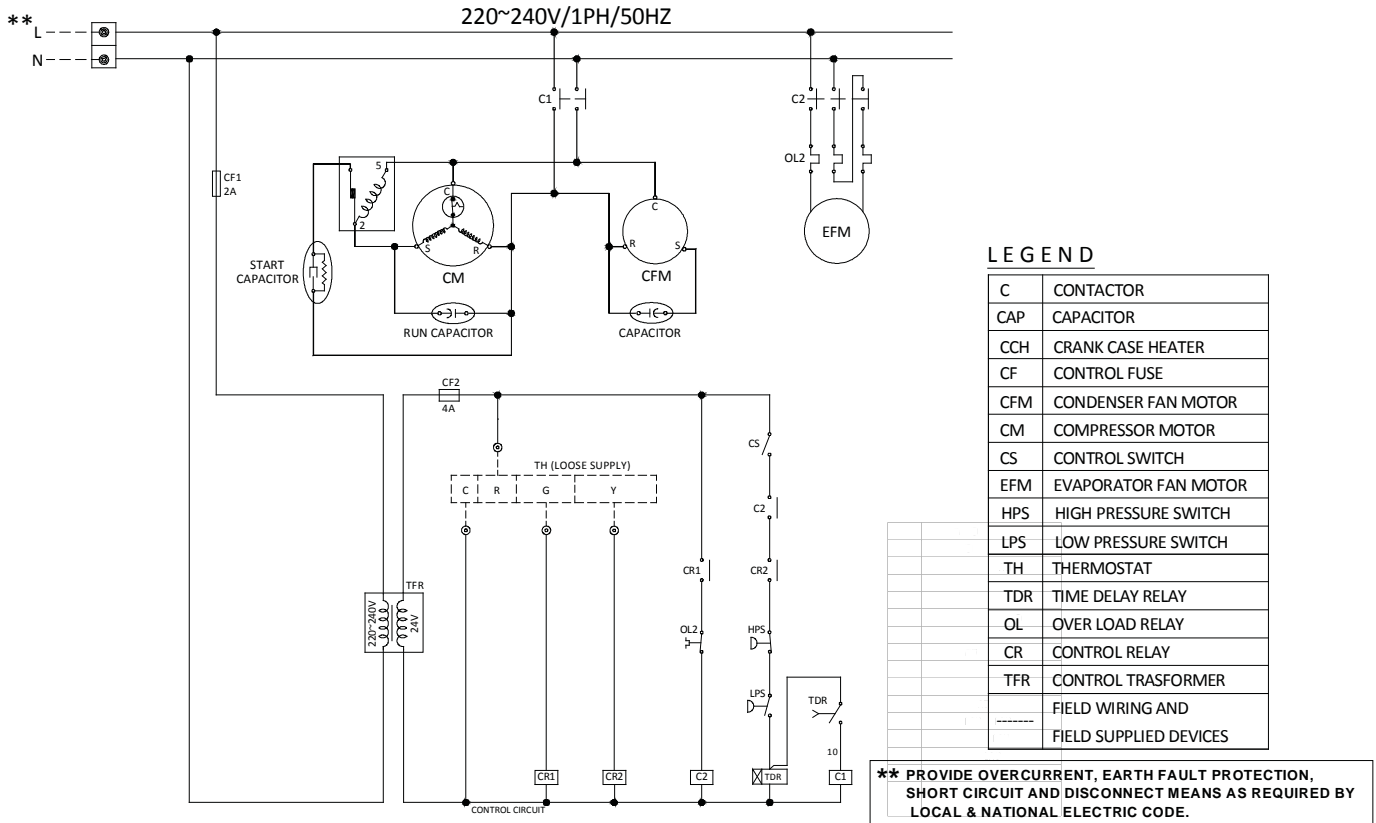
Notes:

Air Flow values are based on pressure drops through evaporator coil, fan casing and 1" washable flat filter

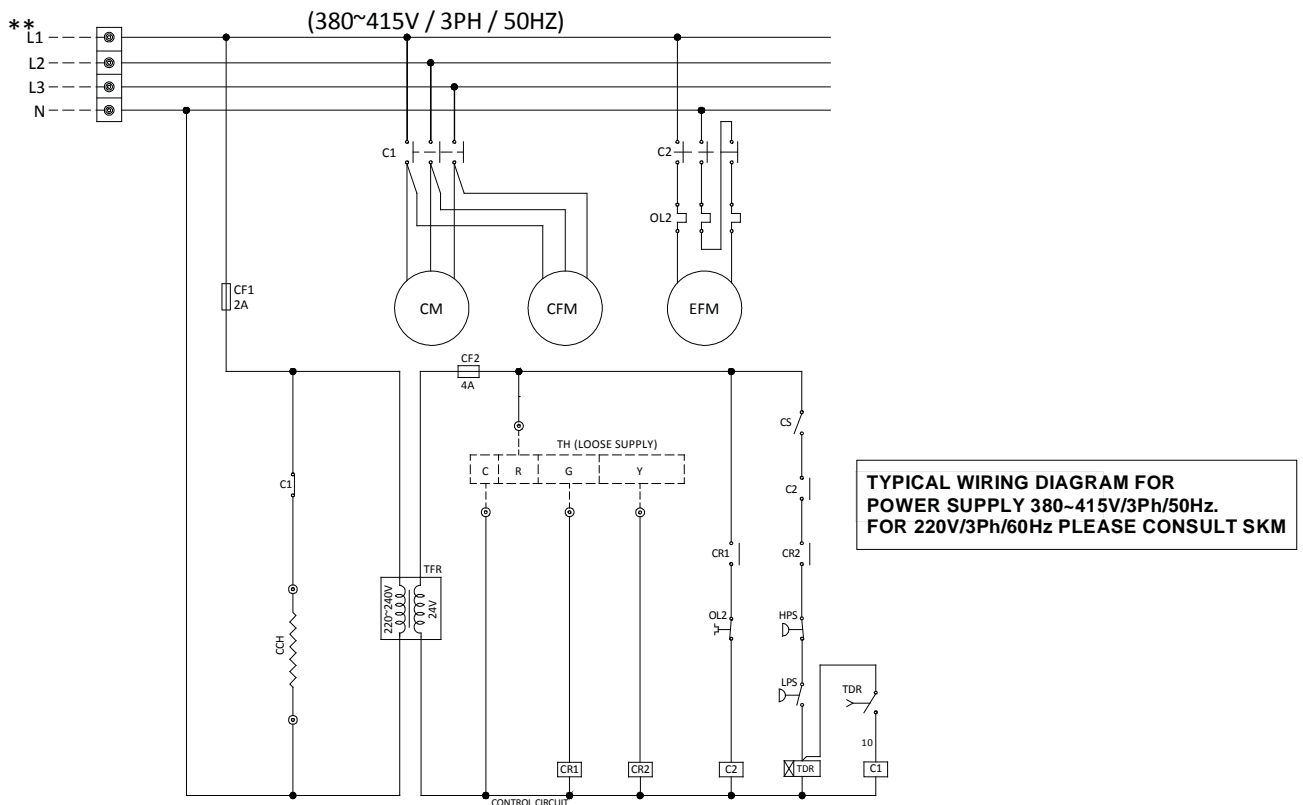
SKM Rooftop Packaged Air Conditioners PACU Series - R22

Typical Wiring Diagram

PACU Models - 5025, 5030, 5035



PACU Models - 5048, 5060, 5065



SKM Rooftop Packaged Air Conditioners PACU Series - R22

ELECTRICAL DATA

50Hz

Model	PACU	5025	5030	5035	5048	5060	5065
Electrical	Power Supply	220-240V/1Ph/50Hz			380-415V/3Ph/50Hz		
	Comp. RLA	15	16.5	15.3	7.3	10.5	10.9
	LRA	58	58	85	50	75	74
	Condenser motor FLA	0.9	0.9	0.9	0.7	0.7	0.7
	Evaporator motor FLA	3.1	3.5	3.9	3.8	5.2	5.7
Unit Characteristics	MFA	40	50	40	25	32	32
	MCA	25	27	26	16	21	22

Table 6

60Hz

Model	PACU	6025	6030	6035	6048	6060	6065		
Electrical	Power Supply	(i) 220V/1Ph/60Hz			(i) 220V/3Ph/60Hz				
		-			(ii) 380V/3Ph/60Hz				
	COMPRESSOR	RLA	(i)	13.2	16.2	19.4	15.6	18.2	19.8
			(ii)	-	-	-	9.4	11.0	10.3
		LRA	(i)	56	65	90	91	124	128
			(ii)	-	-	-	54	75	64
	Condenser motor FLA	FLA	(i)	0.9	0.9	0.9	1.8	1.8	1.8
			(ii)	-	-	-	0.6	0.6	0.6
	Evaporator motor FLA	FLA	(i)	4.3	3.85	3.85	3.9	6.3	6.3
			(ii)	-	-	-	3.9	6.3	6.3
Unit Characteristics	MFA	(i)	40	50	50	50	50	63	
		(ii)	-	-	-	32	32	32	
	MCA	(i)	24	27	31	27	33	35	
		(ii)	-	-	-	18	23	22	

Table 7

Legend :

- RLA** Rated Load Amperes
- FLA** Full Load Amperes
- LRA** Locked Rotor Amperes
- MCA** Minimum Circuit Amperes (for wire sizing).
- MFA** Maximum Fuse Amperes (for Fuse Sizing)

Notes :

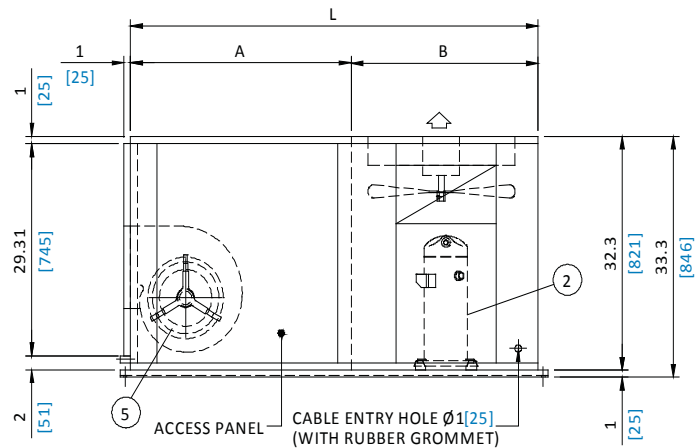
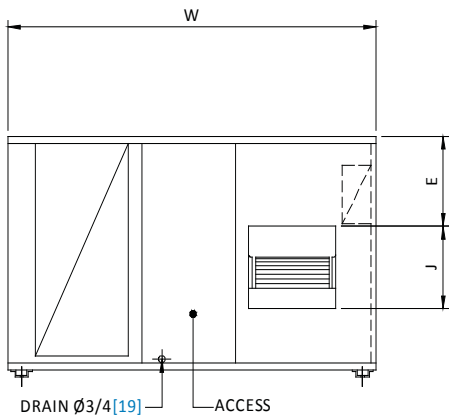
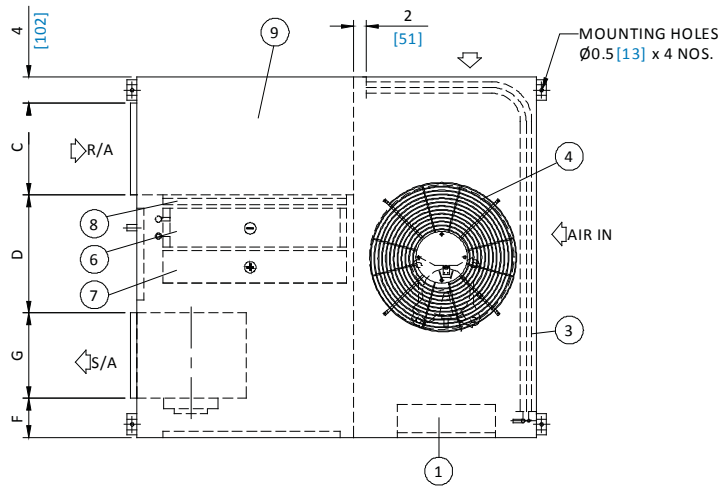
Voltage imbalance between phases to be less than 2%.

SKM Rooftop Packaged Air Conditioners PACU Series - R22

Dimensional Data

- LEGEND**
- ① CONTROL PANEL
 - ② COMPRESSOR
 - ③ CONDENSER COIL
 - ④ CONDENSER FAN
 - ⑤ EVAPORATOR FAN
 - ⑥ EVAPORATOR COIL
 - ⑦ ELECTRIC HEATER(OPTION)
 - ⑧ FLAT FILTER
 - ⑨ RETURN AIR PLENUM

ALL DIMENSIONS ARE IN INCHES [MM]



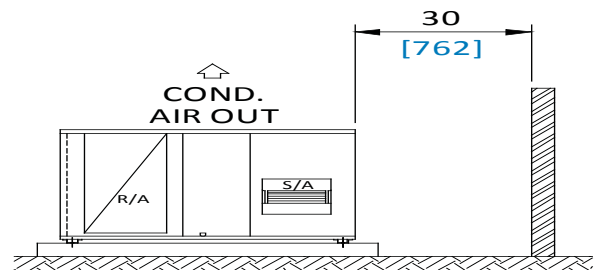
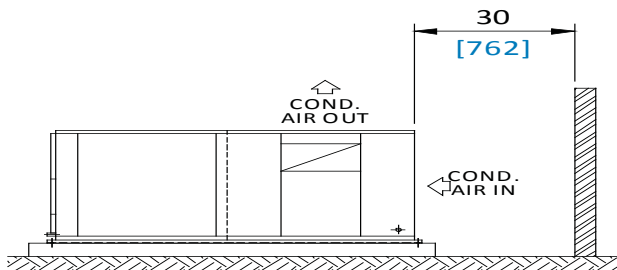
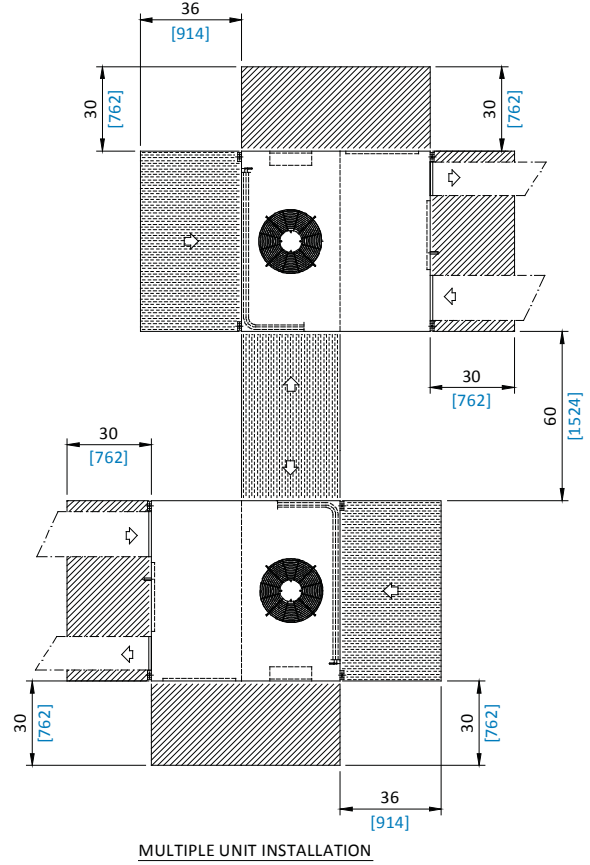
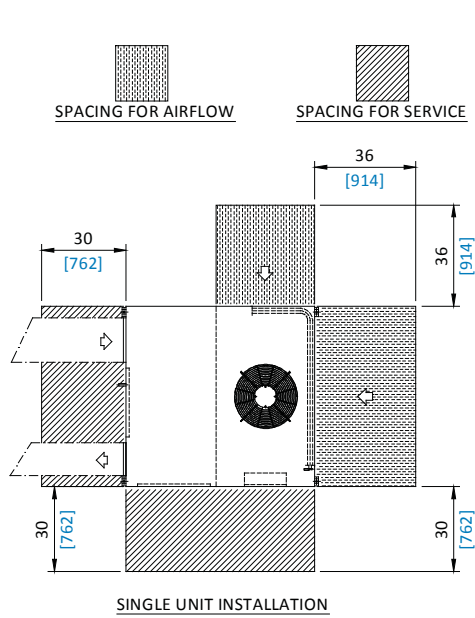
MODEL PACU-	DIMENSIONS									
	L	W	A	B	C	D	E	F	J	G
5025 6025	43 [1092]	47 [1194]	21 [533]	22 [559]	10 [254]	19.4 [492]	17.32 [440]	4.5 [114]	8.2 [208]	9.1 [232]
5030 6030	52 [1321]	52 [1321]	23 [584]	29 [736]	14 [356]	19.4 [492]	14.57 [370]	5.5 [140]	10.3 [263]	9.1 [232]
5035 6035	54 [1372]	52 [1321]	23 [584]	31 [787]	14 [356]	19.4 [492]	14.57 [370]	5.5 [140]	10.3 [263]	9.1 [232]
5048 6048	60 [1524]	55 [1397]	33 [838]	27 [686]	14 [356]	19.8 [502]	14.57 [370]	5.5 [140]	10.3 [263]	11.7 [298]
5060 6060	60 [1524]	55 [1397]	33 [838]	27 [686]	14 [356]	19.8 [502]	14.57 [370]	5.5 [140]	10.3 [263]	11.7 [298]
5065 *6065	60 [1524]	55 [1397]	33 [838]	27 [686]	14 [356]	17.97 [456]	12.44 [316]	6 [152]	11.4 [290]	13.03 [331]

* FOR MODEL 6065 USE SUPPLY FAN SIZE: 10.3 [263]x 11.7 [298]



SKM Rooftop Packaged Air Conditioners PACU Series - R22

Recommended Clearances

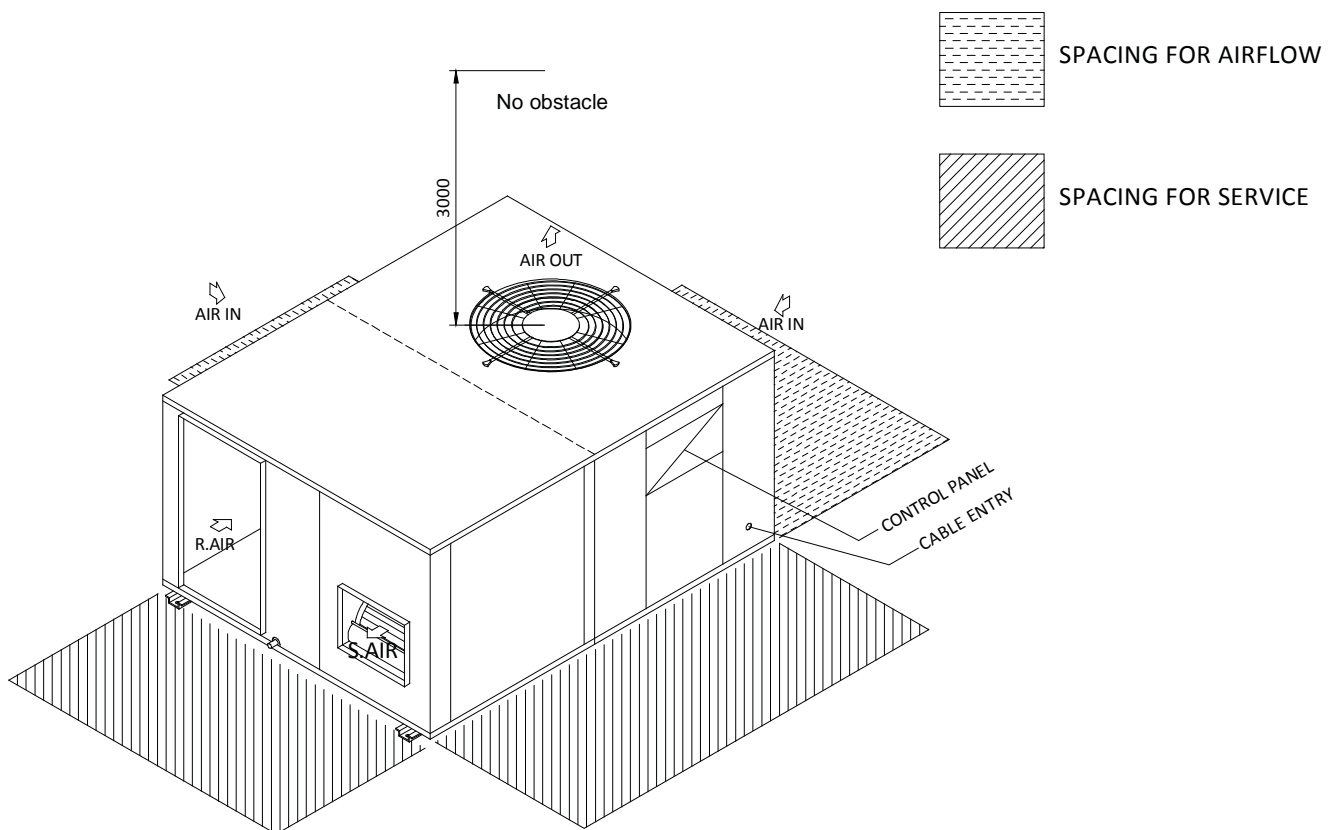


SKM Rooftop Packaged Air Conditioners PACU Series - R22

Installation and Commissioning

- Install the unit in such a location which is flat and strong enough to support its weight.
- Provide a trap of over 2" (50mm) in the drain piping for water seal.
- All field wiring must comply with applicable local and national codes.
- Connect supply and return ducts as shown.
- Service spacing should be provided as shown in the figure. If any obstacles are around the unit, distributed air is short-circuited so that the unit stops frequently and access to the unit is difficult for inspection and aftersales services.

INSTALLATION & COMMISSIONING



SKM Rooftop Packaged Air Conditioners PACU Series - R22

GUIDE SPECIFICATIONS

GENERAL

Packaged air conditioners shall be composed of compressor; condenser and evaporator coils with fans, refrigerant piping, electrical components and enclosing cabinet in one piece. These units shall be factory assembled, internally wired, fully refrigerant charged with R-22, tested under strict quality standards & are suitable for outdoor rooftop installation ground level.

COMPRESSOR(S)

Compressor(s) shall be hermetic reciprocating for smaller models & hermetic scroll for bigger models, refrigerant gas cooled, furnished with internal motor protection and mounted on engineering mounts for perfect vibration isolations.

CONDENSER COIL

Condenser coils shall be air cooled with integral sub cooler, constructed of special inner grooved seamless copper tubes 3/8" OD mechanically expanded into waffle louver aluminum cross fins. These coils shall be tested against leakage by air pressure of 450 psig (3100 kPa) under water, cleaned & dehydrated at the factor.

CONDENSER FANS & MOTORS

Condenser Fans shall be direct driven propeller type discharging air vertically upward, equipped with statically & dynamically balanced aluminum alloy blades, inherent corrosion resistant shaft & PVC coated steel wire fan guard. Condenser fan motor(s) shall be Totally Enclosed Air over (TEAO), 6 poles with class-F insulation, minimum IP55 protection & wired to unit control panel.

EVAPORATOR COIL

Evaporator coil shall be constructed of seamless copper tubes 3/8" OD mechanically bonded to aluminum fins. Coil consists of headers of seamless copper tubing, refrigerant control device & multi-circuited distributor(s). These coils shall be tested against leakage by air pressure of 300 psig (2068 Kpa) under water, cleaned & dehydrated at the factory. Coil shall conform to AHRI - 410.

EVAPORATOR FAN AND MOTOR

Fans of evaporator shall be forward curved, centrifugal type, statically and dynamically balanced, mounted on a single heavy duty shaft with permanently lubricated bearings which is directly driven by electric motor. Motor shall be internally protected with class B & F insulation & IP 20 & 10 protection respectively from smaller models to bigger models, and wired to unit control panel.

FILTERS

Cooling unit shall be provided with cleanable media, easy access, and minimum 1" thick coarse filter having average extraction efficiency of 54% as per ASHRAE standards 52.1 or equivalent.

CASING

Units casing shall be made of Zinc coated galvanized steel sheets, which are then electro statically, powder coated to provide an extremely tough, scratch resistance & excellent anti-corrosive protection. Casing shall pass 1000 hours in 5% salt spray testing at 95° F (35°C) and 95% relative humidity as per ASTM B117.

CONTROL PANEL

The control panel shall contain electrical components, contactors, overload relays, control relays, transformer, anti-recycle time relay delay, control circuit disconnect switch. Power & control circuit terminal blocks & high and low pressure switch.

