

PAC SolarAire Solar Hybrid Power Air Conditioner

- Energy saving ●
- Eco Friendly ●
- High Efficiency ●

Special Features

- Direct power connection from solar panel, no need an extra equipment.
- Hybridization of solar power and electricity power.
- Automatically select power source of solar power or electricity power to reach the power consumption inquired.
- Hybrid power system combine solar power and electricity power to continuously operating even without solar power.
- Energy saving inverter air conditioner.
- Easy installation and reliable system.
- Various fan-coil unit type for selection.
- Available capacity from 13,000BTU to 36,000BTU.
- Get free hot water by installed with PAC Frenergy – Heat Recovery Water Heater (optional)



www.pac.co.th

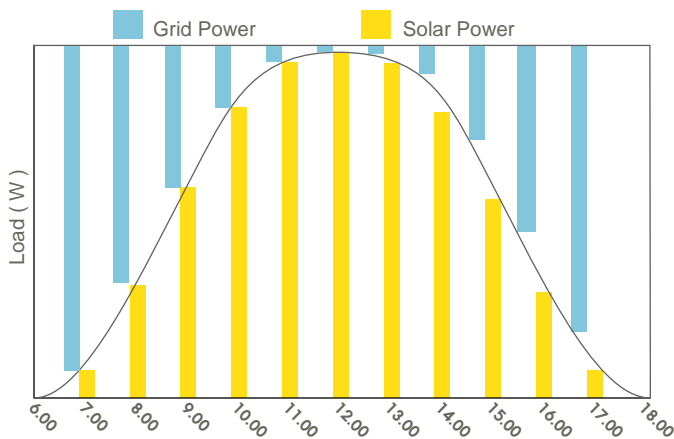
Solar Hybrid Power Air Conditioner

Air conditioning accounts to the highest power consumption in the household. Especially of electricity on peak demand which operate during daytime, it's cause of electric bill increase. On the other hand, Thailand has the average annual peak sun hours more than 6 hours per day, for 6 months continuously per year. It's mean we can apply the advantage of eternity and permanent energy sources from the nature.

PAC SolarAire is solar hybrid power inverter air conditioner which has been designed for using both of solar energy and electric power, automatically continuous operation during period of insufficient sunlight or at night. There are various capacity and type for selection from 13,000BTU to 36,000BTU with EGAT Label No. 5 and TISI standard performance.

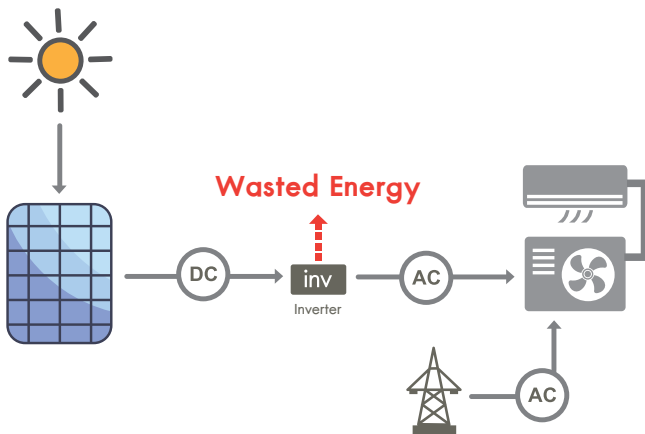
PAC SolarAire more save and cost efficient for daytime usage, suitable for general business such as factory, school, hospital, office, coffee shop, restaurant or residential. Save power fee up to 85% and get free hot water by installed with PAC Frenergy – Heat Recovery Water Heater.

Why PAC SolarAire?

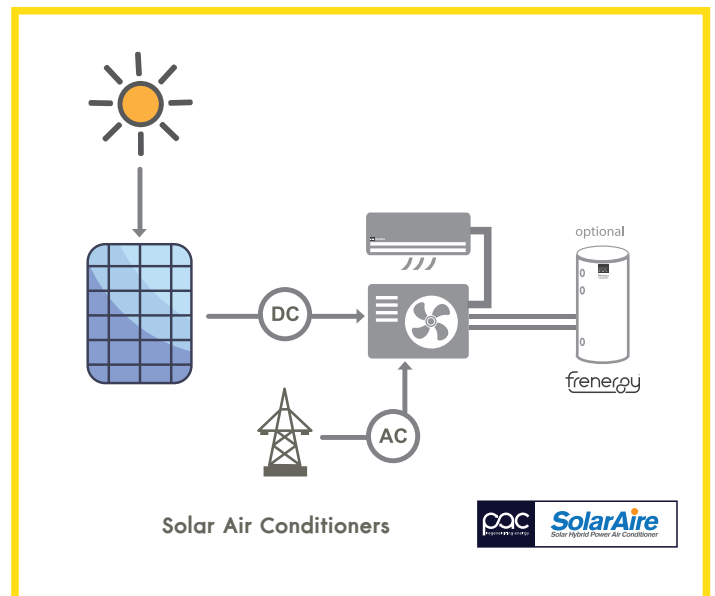


In operation of traditional air conditioner with solar power, while solar PV generate DC power, the inverter needed to convert the DC power input to be AC power output, then supply to the air conditioner unit. Energy conversions need the additional equipment such as inverter, charger and will have energy loss in process. In the other hand, PAC SolarAire is all DC parts designed which can be use directly solar power without any extra equipment. During period of insufficient sunlight, PAC SolarAire will automatically switch to AC power input.

Chart of solar power and electric power usage in a day



Conventional Solar Air Conditioners






Solar Air Conditioners

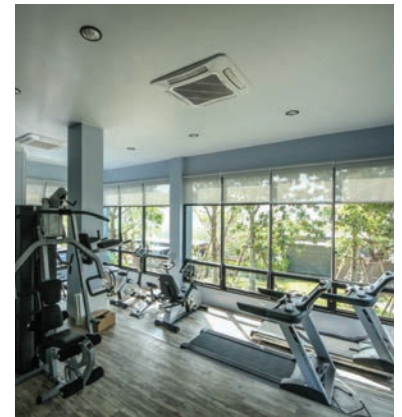


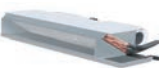
PAC SolarAire Specification



Fancoil Unit Picture											
Fancoil type			Wall Mount type				Floor-Ceiling type				
Indoor model			PKSW13A	PKSW19A	PKSW25A	PKSW36A	PKSC13A	PKSC19A	PKSC25A	PKSC36A	PKSC40A
Outdoor model			PKSM13A	PKSM19A	PKSM25A	PKSM36A	PKSM13A	PKSM19A	PKSM25A	PKSM36A	PKSM40A
Power supply	AC		220VAC/ 1Ph/ 50Hz								
	DC	Voc	60 - 400VDC								
		Vmax	400VDC								
		Imax	15A								
Cooling capacity	Btu/Hr	12,135 (6,500-15,000)	19,325 (9,000-22,000)	25,117 (13,000-27,000)	35,720(18,000 - 41,000)	12,681 (6,500-15,000)	18,995 (9,000-22,000)	25,066 (13,000-27,000)	37,465 (18,000-41,000)	40,298(21,000-45,000)	
	Watt uon.2134	3,600	5,300	7,100	10,600	3,600	5,300	7,300	10,600	11,800	
Power consumption	Input	Watt	1,000 (400-1,500)	1,472 (800-1,760)	1,950 (1,050-2,600)	3,179(1,400 -3,800)	1,000 (400-1,500)	1,472 (800-1,760)	2,157 (1,050-2,600)	3,179 (1,400-3,800)	3,810(1,700 - 4,700)
	Current	A (min-max)	(2.5-7)	(3.5-8)	(4.5-13)	(6.5 - 18)	(2.5-7)	(3.5-8)	(4.5-13)	(6.5-18)	(7.5 - 22)
SEER (Without Solar)	BTU/WH		16.88	20.37	15.87	16.49	19.76	16.17	16.38	16	16.14
COP (Without Solar)	Watt/Watt		3.6	3.6	3.6	3.10	3.6	3.6	3.41	3.43	3.1
Air flow	CFM		400	600	800	850	400	600	800	1,200	1,250
Connecting pipe	Liquid	inch	1/4"	1/4"	1/4"	3/8"	1/4"	1/4"	1/4"	3/8"	3/8"
	Gas	inch	1/2"	1/2"	5/8"	5/8"	1/2"	1/2"	5/8"	5/8"	5/8"
Refrigerant	Type		R32								
	Charge volume	kg	0.95	1.2	1.75	2.25	0.9	1.23	1.75	2.1	2.3
Dimension (WxDxH)	Indoor unit	cm	99 x 21 x 30.5	117 x 22 x 36	117 x 22 x 36	145 x 23 x 36.5	101 x 21 x 64	101 x 24 x 64	131 x 24 x 64	161 x 24 x 64	161 x 24 x 64
	Outdoor unit	cm	85 x 28.5 x 54.5	95 x 37 x 69.5	96 x 39 x 79.5	98 x 39 x 79.5	85 x 28.5 x 54.5	95 x 37 x 69.5	98 x 39 x 79.5	98 x 39 x 79.5	110 x 40 x 110.5
Net weight	Indoor unit	kg	12	18.5	20	27	28	32	45	58	58
	Outdoor unit	kg	42	54	62	68	42	54	62	68	77

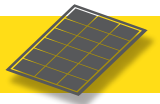
Fancoil Unit Picture						
Fancoil type			4 Way Cassette type			
Indoor model			PKSF19A	PKSF25A	PKSF36A	
Outdoor model			PKSM19A	PKSM25A	PKSM36A	
Power Supply	AC		220VAC/ 1Ph/ 50Hz.			
	DC	Voc	60 - 400VDC			
		Vmax	400VDC			
		Imax	15A			
Cooling capacity	Btu/Hr	20,363(9,000-22,000)	24,587 (13,000-27,000)	36,000 (18,000-42,000)		
	Watt uon.2134	5,700	7,300	10,600		
Power consumption	input	Watt	1,581 (800-1,850)	2,030 (1,050-2,600)	3,420 (1,400-4,000)	
	Current	A (min-amx)	(3.5 - 8)	(4.5 - 13)	(6.5 - 18)	
SEER (Without Solar)	BTU/WH		15.73	15.49	16.72	
COP (Without Solar)	Watt/Watt		3.6	3.6	3.1	
Air flow	CFM		600	700	900	
Connecting pipe	Liquid	inch	1/4"	1/4"	3/8"	
	Gas	inch	1/2"	5/8"	5/8"	
Refrigerant	type		R32			
	Charge volume	kg	1.2	1.5	1.8	
Dimension (WxDxH)	Indoor unit	cm	83.5 X 83.5 X 30	83.5 X 83.5 X 30	83.5 X 83.5 X 30	
	Outdoor unit	cm	95 X 37 X 69.5	98 X 39 X 79.5	98 X 39 X 79.5	
Net weight	Indoor unit	kg	29.5	31	35	
	Outdoor unit	kg	54	62	68	



Fancoil Unit Picture						
Fancoil type			Concealed type			
Indoor model			PKSD13A	PKSD19A	PKSD25A	PKSD36A
Outdoor model			PKSM13A	PKSM19A	PKSM25A	PKSM36A
Power supply	AC		220VAC/ 1Ph/ 50Hz			
	DC	Voc	60 - 400VDC			
		Vmax	400VDC			
		Imax	15A			
Cooling capacity	Btu/Hr	12,714 (6,500-15,000)	19,009 (9,000-22,000)	25,136 (13,000-27,000)	37,098 (18,000-41,000)	
	Watt uon.2134	3,600	5,300	7,300	10,600	
Power consumption	Input	Watt	1,000 (400-1,500)	1,472 (800-1,760)	2,157 (1,050-2,600)	3,420 (1,400-3,800)
	Current	A (min-max)	(2.5-7)	(3.5-8)	(4.5-13)	(6.5-18)
SEER (Without Solar)	BTU/WH		18.46	15.87	17.16	16.65
COP (Without Solar)	Watt/Watt		3.6	3.6	3.41	3.1
Air flow	CFM		450	630	840	1,250
Connecting pipe	Liquid	inch	1/4"	1/4"	1/4"	3/8"
	Gas	inch	1/2"	1/2"	5/8"	5/8"
Refrigerant	Type		R32			
	Charge volume	kg	0.9	1.23	1.75	2.1
Dimension (WxDxH)	Indoor unit	cm	92 x 47 x 21	97 x 50.5 x 24	122.7 x 50.5 x 24	153.5 x 53.5 x 25
	Outdoor unit	cm	85 x 28.5 x 54.5	95 x 37 x 69.5	98 x 39 x 79.5	98 x 39 x 79.5
Net weight	Indoor unit	kg	12	21	24	36
	Outdoor unit	kg	42	54	62	68



Solar Cells PV Panel



Recommended amount of solar panel for PAC SolarAire installation (panel)

PV Panel	Model				
	PKXX-13A	PKXX-19A	PKXX-25A	PKXX-36A	PKXX-40A
	13,000 BTU/hr	19,000 BTU/hr	25,000 BTU/hr	36,000 BTU/hr	40,000 BTU/hr
300 Watt	4	5	7	10	12
400 Watt	3	4	5	8	8
450 Watt	3	4	5	7	8

* Recommended by rated power consumption

** Monocrystalline type PV module

Maximum saving of PAC SolarAire usage

BTU (BTU/hr)	Saving (Baht)/Year
12,000	7,190.48
18,000	11,645.08
25,000	15,290.85
36,000	22,449.91
40,000	23,986.90



Reference : power consumption of PAC SolarAire (Ceiling type) Operating calculation : 8 hours per day for a year (365 days)
 The receipt of solar energy period : 7 hours per days (09:00 – 16:00) Average electricity rate : 4 baht/unit Savings result might be changed according to operating and solar panels installation.

PAC SolarAire References

Funaki Importexport Co.Ltd., • Qualimed Co.Ltd., CPF Thailand Public Company Limited • Pork Factory Business • 7-11 Thasala Lanta mart Department Store • Thanapiriya Supermarket Chiang Rai, Bangkok Drung Store Warehouse • Puratos (Thailand) Co.,Ltd, Ong Cafe Rungkongong Ratchaburi • Residence Khlongluang Pathumthani Residence Bangkapi Bangkok • Residence Onnut Bangkok • Client House • Romklao Road Bangkok • Kokphochai hospital Khon Kaen



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