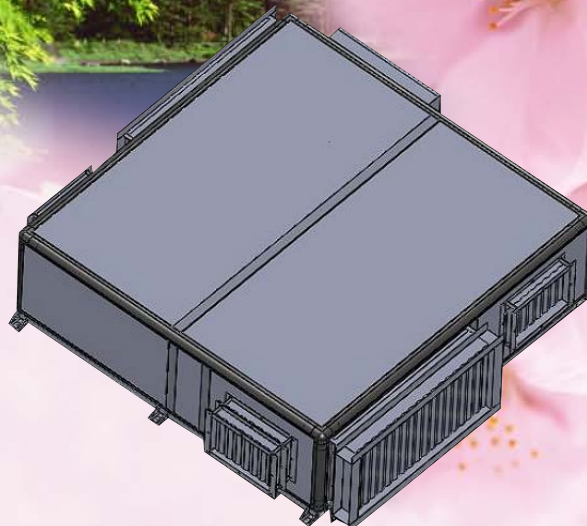


**Sakura Air Conditioner
User-friendly, Earth-friendly**



Packaged “Room Top” Air conditioner
HPACK-RH Series

Features and Benefits

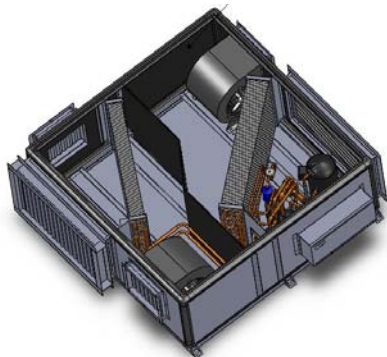
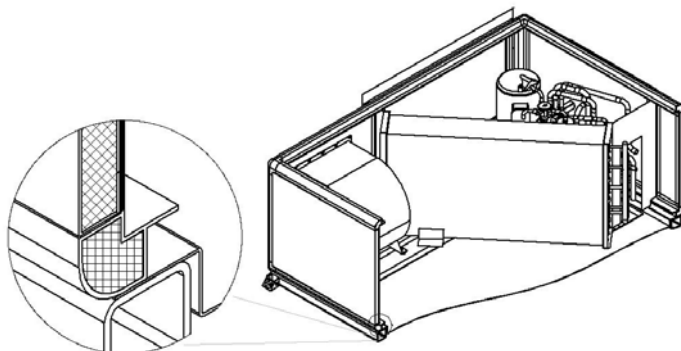
Efficient cooling, easy installation and time-saving maintenance are all attainable by one single unit.

- By hi-COP Scroll Compressor being equipped, the unit is highly efficient and most welcomed by commercial building owners.
- This unit is designed especially for commercial use for its extra low noise by heavy insulation and special vibration-resistant construction being installed within a limited space at room top. The compact, space-saving, unit fit easily and securely to an available position at a ceiling in a minimal time and cost of installation.
- If required, the unit can also be used as a Split System to mount the condenser section horizontally. Centrifugal fans also allow ducting both as Air Evaporator and Condenser.
- With easily removed five access panels, quick and convenient reach to all components when needed to extend maintenance. Additionally, all required service/maintenance to the unit can be extended from one side, allowing the unit can be installed against a wall or ceiling, obviously a space-saving.
- Specially designed Scroll compressor for high efficiency is mounted internally by spring to minimize vibration noise and is hermetically sealed against contamination to assure longer life and dependable operation.

Structure:

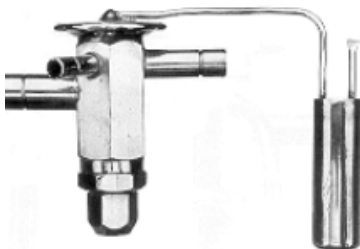
- Sandwich panel with injected polyurethane core (25mm thick) with acoustic material inside.
- Fully painted drain pan with 10mm thick insulation material.
- Full Aluminum Frame with corner pieces.
- HEPA filter.

Standard: EN1822, Class: U15



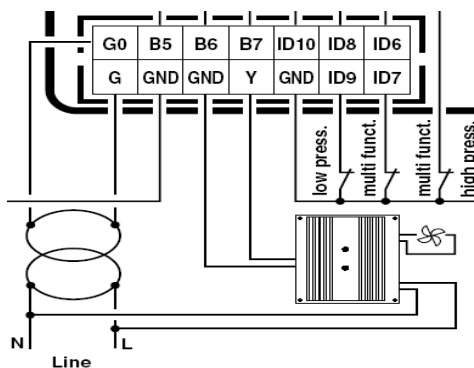
Reliable Components adopted

- SANYO R410a Hi-COP scroll compressor
- CAREL controller
- YILIDA fan
- ALCO or SPORLAN refrigerant elements
- Excellent damper driver



Condensate Fan Speed Control

- By fitting the units with a Condensate fan Speed Control device, it considerably reduces the energy being consumed for condensation. This device is equipped with electronically controlled, high efficiency fans with sophisticated speed adjustment whereby energy consumption is greatly reduced and noise is extremely low.
- Compressor COP will be high under constantly condensed pressure.



Partial Loading Operation

- The units installed in air-conditioning systems are sized according to the maximum loading of the system while, in practice, they will mostly be operated in partial loading only. HPAck-RH Series feature particularly high efficiency with partial loading. Using this unit in all installations under varying loading results significant energy savings.
- All the units also have “sliding temperature” function, which in the single-compressor units permits modulation of the supply air temperature in relation to the system load. This modulation is important to optimize the compressor operating cycles, so that they remain within safety limits
- r27: The low loading condition is determined when only one compressor is started and then is stopped after operating for less than the time set for parameter r28.

The settings are:

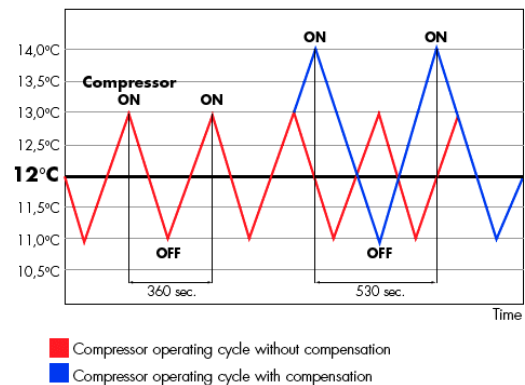
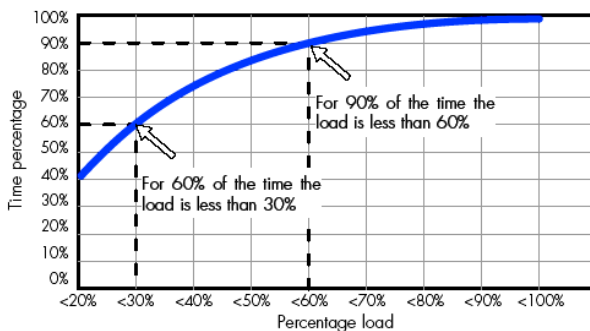
r27=0: the function is disabled;

r27=1: enabled only in chiller mode;

r27=2: enabled only in heat pump mode;

r27=3: enabled in chiller and heat pump modes.

Refer to r28, r29, r30



Free Cooling Working Mode

● Enable free-cooling/free-heating

r34: Sets the type of free-cooling/heating with or without compressors

r34= 0: disabled

r34= 1: free-cooling /without compressors / cooling only

r34= 2: free-cooling / with compressors / cooling only

r34= 3: free-heating / without compressors / heating only

r34= 4: free-heating / with compressors / heating only

r34= 5: free-cooling and free-heating / without compressors / free-cooling in cooling only and free-heating in heating only

r34= 6: free-cooling and free-heating / with compressors / free-cooling in cooling only and free-heating in heating only

r34= 7: free-cooling / without compressors / always

r34= 8: free-cooling / with compressors / always

r34= 9: free-heating / without compressors / always

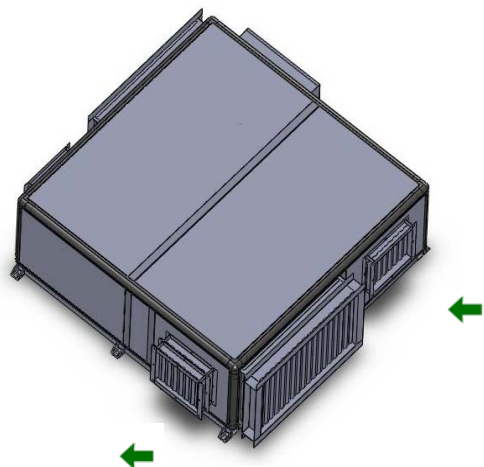
r34= 10: free-heating / with compressors / always

r34= 11: free-cooling and free-heating / without compressors / always

r34= 12: free-cooling and free-heating / with compressors / always

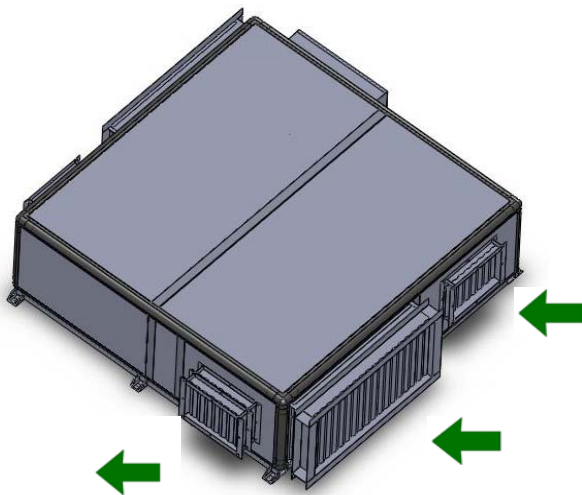
Purpose of this function is to take an advantage of outside climate when it can cool or heat the controlled environment by adjusting inlet of outside air into the room.

Free-cooling is possible at a time when: Room Temperature minus Outside Temperature > Free-cooling differential (r29).



CO₂ detection to keep room air fresh (option)

- Detectable gas: CO₂
- CO₂ detection density: 0~2000ppm (adjustable)
- Accuracy: $\pm 30\text{ppm} + 5\%$ range
- Stability: less than 25 in life time
- Response time: less than 60 seconds
- Preheating time: less than 5minutes
- Certification: CE



Specifications

HPACK - RH Series TECHNICAL SPECIFICATIONS -----INDOOR INSTALLATION

Size		90	100	130	150	180	200	250	300
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COOLING

Cooling capacity	1	kW	8.7	10.5	12.9	15.3	18.7	20.7	26	30.0
Sensible capacity	1	kW	6.4	8.2	9.8	11.3	14.3	16.2	18.5	20.8

HEATING

Heating capacity	4	KW	9.0	11	13.2	16	19.2	21.5	27.1	31
Compressor power input	1	kW	3.25	3.5	4.6	4.74	5.6	7.3	8.6	9.9

COMPRESSOR

Type of compressors	2		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
No. of Compressors		Nr	1	1	1	1	1	1	1	1
Std Capacity control steps		Nr	1	1	1	1	1	1	1	1
Oil charge (C1)		l	1.1	1.1	1.36	1.65	1.65	1.65	4	4
Refrigerant charge (C1)		kg	3.3	3.3	3.6	3.7	4.9	5.2	7	8.5
Refrigerant circuits		Nr	1	1	1	1	1	1	1	1

AIR HANDLING SECTION FANS (OUTLET)

Type of fans	3		CFG	CFG	CFG	CFG	CFG	CFG	CFG	CFG
Number of fans		Nr	1	1	1	1	1	1	1	1
Standard air flow		l/s	417	598	722	837	1030	1222	1280	1500
Nominal static pressure		Pa	90	80	115	90	160	120	170	170

EXTERNAL SECTION FANS

Type of fans	3		CFG	CFG	CFG	CFG	CFG	CFG	CFG	CFG
Number of fans		Nr	1	1	1	1	1	1	1	1
Standard air flow		l/s	800	870	1080	1250	1350	1650	1800	2200
Nominal static pressure		Pa	50	50	50	50	50	50	50	50

STANDARD UNIT WEIGHTS

Shipping weight		kg	160	170	200	203	270	270	370	370
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DIMENSIONS

Length		mm	1200	1200	1480	1480	1680	1680	2080	2080
Depth		mm	1200	1200	1480	1480	1680	1680	2080	2080
Height		mm	560	560	600	600	600	600	700	700

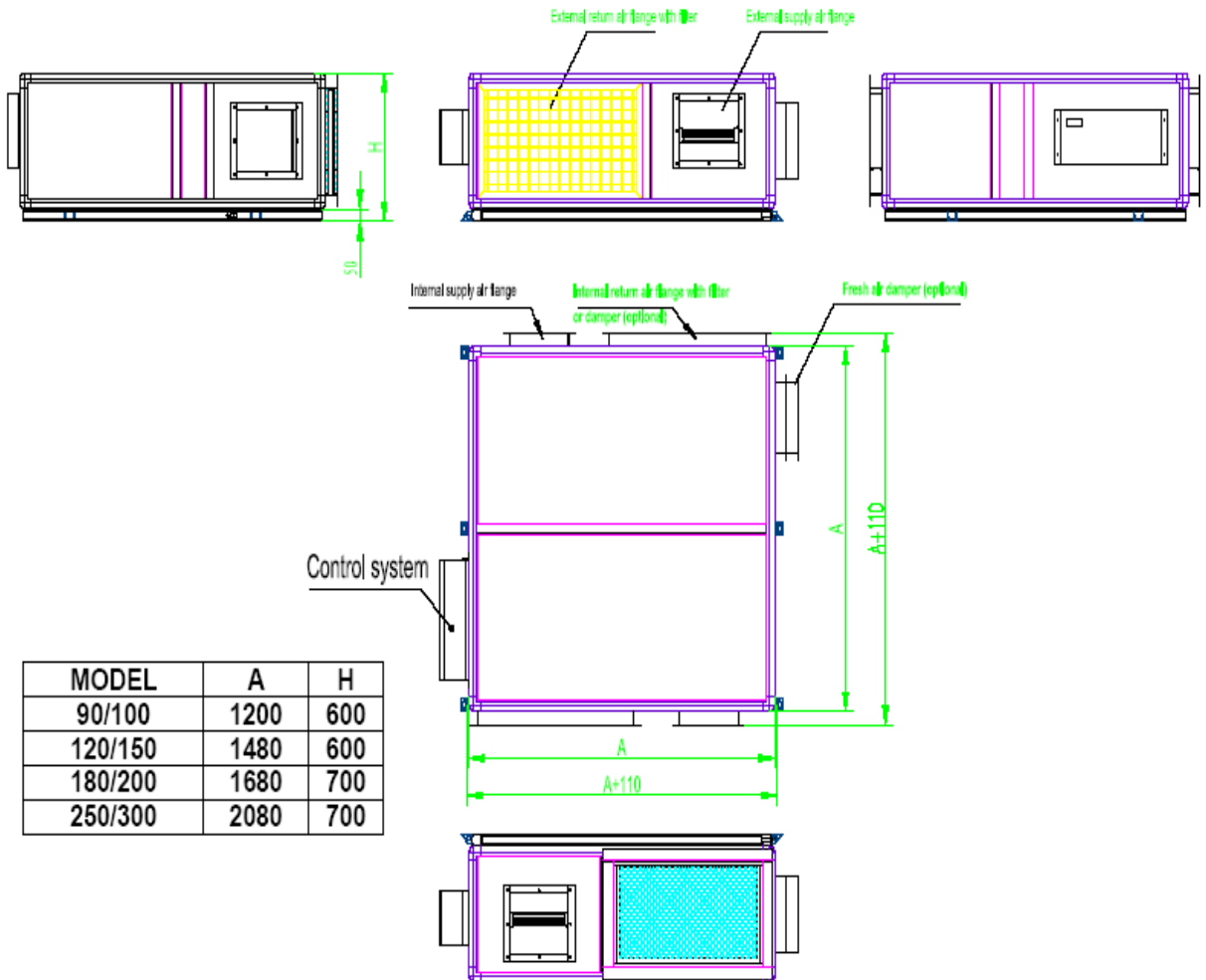
(1) Ambient temperature 27°C/19.5 WB outside temperature 35°C

(2) SCROLL = scroll compressor

(3) CFG = centrifugal fan

(6) Ambient temperature 20°C, outside temperature 7°C DB/ 6°C WB.

Dimensions



SAKURA CORPORATION

Tel: (81)45-949-8550 Fax: (81)45-949-8551

E-mail: mail@sakura-aircon.com URL: www.sakura-aircon.com