



SANYO

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AIRCONDITIONERS EUROPE

GENERAL CATALOGUE 2006



SANYO Airconditioners Europe History

SANYO

The **SANYO Group of Companies** is truly international, including 63 manufacturing companies, 40 sales companies and 37 other companies around the world. **SANYO's strategic business focus is on the Digital & Devices and Energy and Ecology fields.** Committed to solving environment issues, the Company has made the development of technologies with minimum of burden on the environment, an area of strenght.

It emphasizes such technologies as clean-energy generation air conditioning methods that do not require the use of harmful chlorofluorocarbons. **SANYO Airconditioners Europe S.r.l. is the sales company for the SANYO air conditioners in Europe,** a leader in the field of air conditioning equipments, with a wide variety of products based upon environment-friendly technology. We are dedicated to sharing **SANYO's management philosophy** which is **"We are committed to becoming an indispensable element in the lives of people all over the world."**

BRIEF HISTORY OF SANYO AIR CONDITIONER

- 1958 Production of first window air conditioner begins
- 1960 SANYO introduce the world's first heat pump A/C units
- 1961 Started sales of split type and package type air conditioning
- 1970 SANYO launch world's first split type equipped with rotary compressor
- 1971 Production of absorption chiller begins
- 1983 SANYO release first Gas Heat Pump A/C
- 1989 World's first simultaneous heating & cooling VRF system
- 1991 Samples of world's first solar powered A/C released
- 1993 SANYO released first large-capacity VRF system (W-Multi)
- 1995 World's first large capacity heating & cooling VRF system (W-Multi 3 way)
- 2000 SANYO begins direct sales in Europe
- 2002 SANYO launch Gas Heat Pump VRF in Europe
- 2004 Started sales of R410A inverter driven VRF in Europe
- 2005 SANYO releases simultaneous heating & cooling GHP in Europe (3 way ECO-G) SANYO launches Mini VRF for light commercial use (Mini ECO-i)
- 2006 SANYO introduce new R410A GHP units and new VRF system's range

SANYO's New Vision 'Think GAIA'

SANYO



SANYO's mission is to 'restore a beautiful Earth to the children of the future' and using 'Sustainability' (Symbiotic Evolution) as a keyword. SANYO will aim to 'become a company that pleases life and the Earth', and 'Think GAIA' will be the new vision guiding SANYO. In order to contribute to GAIA, SANYO will knit together various proprietary technology competences as 'solutions that add value to the Earth' and thus, aim to become a global solutions provider. This would, in turn, lead to significant business chances in the increasingly globalizing world markets. Based on this vision, the 'SANYO EVOLUTION PROJECT' is launched. The new Project is introduced for the realization of SANYO's new vision - 'THINK GAIA', and its major programs.



Photocopyer model



Absorption Chiller



Commercial refrigerators



ECO Compressor



Gas Engine Driven Heat

SANYO Airconditioners Technology

SANYO

High Energy Efficiency

Sanyo conforms to the 2002/91/EC Directive - 92/75/EEC 'Energy labelling Directive (ELD)', which is applicable from June 2004 on all air conditioning products up to 12 kW cooling capacity. The DC inverter technology helps us to achieve the 'A' class, the highest level of energy efficiency which is clearly indicated on the standard labelling system.

A Class

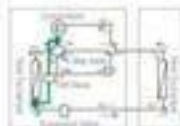
Twin rotary compressor

The dual rotors revolve smoothly in a well-balanced fashion for stable and efficient performance. This also contributes to increased comfort and rapid cooling, as well as the unit's extra quiet, economical and reliable operation.



No reverse cycle operation

Sanyo hot-gas defrost valve avoids uncomfortable conditions during defrosting functions ensuring continuous operation even in very low ambient temperature. A comfortable room temperature is kept while minimizing the decline of indoor air temperature.



Built-in temperature sensor

The temperature sensor incorporated into the remote controller monitors the temperature around you. Placing the sensor remote controller at your bedside you can enjoy comfortable warmth throughout the night.





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SANYO

SANYO Residential Air Conditioners
are ideally suitable for use in your own home

Its stylish and compact design will fit beautifully into any surroundings. This is the next generation SANYO air conditioners feature cutting edge technology to provide total comfort.

They are available with compressor constant speed or inverter multi and single split in heat pump and single split cooling only.

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SAP-KCRV94EHDX • SAP-KCRV124EHDX

Power Range from 2.65 kW to 3.5 kW

INVERTER HEAT PUMP					
		size 94		size 124	
Performance		Cooling	Heating	Cooling	Heating
Capacity	kW	2.9-2.40-1.5	3.9-3.8-1.3	3.9-1.5-4.2	3.9-4.8-6.0
Power input	kW	268-120-130	268-229-238	268-675-1435	268-1740-2100
SEER / COP		5.30	5.30	4.00	4.25
Energy class		A	A	A	A
Running expense	€	1.9-2.4-4.9	1.9-2.2-3.9	1.9-4.5-7.8	1.9-5.2-9.9
Annual energy consumption (cooling)	kWh	265	-	421.5	-

		SAP-KCRV94EHDX		SAP-KCRV124EHDX	
Indoor Unit					
No. of connections (2)	1/2"	1.8	2.0	2.0	2.0
Minimum distance	1.8m/6'	-	-	-	-
Sound Power Level (dB)	dB-A	31	32	32	33
Sound Pressure Level (dB(A), 1m)	dB-A	22/24/26/27	22/26/28/30	22/24/26/27	22/26/28/30
Dimensions (HxWxD)	mm	260x260x100	360x260x100	360x260x100	360x260x100
Net weight	kg	12.5	12.5	12.5	12.5
Power supply	V (ph, Hz)	230V, 1-Ph, 50		230V, 1-Ph, 50	

		SAP-KCRV94EHDX		SAP-KCRV124EHDX	
Outdoor Unit					
Sound Power Level (dB)	dB-A	51	52	52	53
Sound Pressure Level (dB)	dB-A	49	50	50	51
Dimensions (HxWxD)	mm	560x790x295		560x790x295	
Net weight	kg	42		42	
Power supply	V (ph, Hz)	230V, 1-Ph, 50		230V, 1-Ph, 50	

*Noise indoor and outdoor is SAP-KCRV94EHDX, SAP-KCRV124EHDX supplied without any pipe.

		size 94		size 124	
Refrigerant circuit					
Tube diameter (mm)	mm	6.4 (1/4") / 9.5 (3/8")	6.4 (1/4") / 9.5 (3/8")	6.4 (1/4") / 9.5 (3/8")	6.4 (1/4") / 9.5 (3/8")
Max piping length	m	15	15	15	15
Max elevation diff. - S/L (m)	m	10	10	10	10
Chargement piping length	m	7.5	7.5	7.5	7.5
Amount of additional refrigerant	g/ft	15	15	15	15

Rating conditions
Cooling: indoor air temperature 27°C (80°F) DB, 19°C (66°F) WB, outdoor air temperature 35°C (95°F) DB, 24°C (75°F) WB
Heating: indoor air temperature 20°C (68°F) DB, outdoor air temperature 7°C (45°F) DB, 6°C (43°F) WB



		PRICE	
Indoor unit price	Unit	500.00	600.00
Outdoor unit price	Unit	500.00	600.00
Set price	Unit	1,000.00	1,200.00



Remote control



Shiki Sai Kan



SAP-KRV_EHDX

Sanyo's flagship model integrates cutting edge technology including the industry's top-class energy saving design, a wide array of airflow control and heating/cooling operation down to -15°C



SAP-KRV_EHDX

- Amazing performance in energy-saving: COP up to 5.0
- Sleek & stylish panel design in a choice from 7 designer colors
- Non-reverse cycle defrosting system for no-stop heating operation
- Cooling & heating operation down to -15°C
- LED photocatalytic sterilization function features excellent performance against odors, germs and bacteria
- Exclusive multi-functional wireless remote control with built-in temperature sensor
- 3-D air flow
- Ion generator refreshes your room with negative ions
- Air clean quiet filter
- Super quiet: 22 dB-A
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-KCRV93EHFP • SAP-KCRV123EHFP
SAP-KCRV184EH • SAP-KCRV244EH

Power Range from 2.65 kW to 7.1 kW

		IMPERIAL PLANT POWER							
		size 90		size 125		size 160		size 200	
Performance		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	62.0 (160.0)	9.9 (30.0)	140.0 (380)	10.0 (30.0)	170.0 (450)	12.0 (36)	220.0 (580)	12.0 (36)
Power input	kW	50.0 (130)	100 (260)	100 (260)	100 (260)	100 (260)	100 (260)	100 (260)	100 (260)
CO ₂ / CO ₂ e	kg/kW	3.31	0.52	3.21	0.57	3.61	3.81	3.51	3.81
Energy class		A	A	A	A	A	A	A	A
Running expenses	€	1.3 (3.4)	1.2 (4.0)	1.2 (4.0)	1.3 (4.1)	1.3 (4.0)	1.3 (4.0)	1.3 (4.0)	1.3 (4.0)
Payback period (months)	years	27.3	3.0	3.0	3.3	3.0	3.3	3.3	3.3

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Subgroup overall	size 82	size 122	size 189	size 264
Subgroup size	82 (9.6, 9.52%)	122 (9.6, 9.52%)	189 (9.6, 12.7%)	264 (9.6, 15.58%)
Max joint length	m	15	15	30
Max diameter 0.0 - 1.0	m	7	7	15
Chaperone joint length	m	7.5	7.5	15
Amount of additional refinement link	m	15	25	25

Supply conditions

Cloning: Vector at temperature 27°C (26/28°C 50%). Cloning at temperature 27°C (26/28°C 50%).

^aSpecifications subject to change without notice.



		Price	
Index unit price	£/unit	1,000.00	900.00
Quantity sold price	£/unit	900.00	800.00
Net price	£/unit	1,000.00	1,200.00



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SAP-KRV_EH/FPI



Remote control



SAP-CRV-EH(FP)

- Stylish appearance with flat front panel
- DC-Inverter technology for precise temperature control
- Powerful & comfortable with compact design
- Automatic restart function
- Auto sweep control
- Powerful start function for rapid cooling/heating
- Washable and reusable air clean quartz filter
- Ion generator refreshes your room with positive ions
- Cooling & Heating operation down to -15°C (also 18A & 24A)
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- 24-hour clock with on/off program timer
- Washable front panel
- Quiet operation (23 dB-A @ 1m)
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-KCRV93EH • SAP-KCRV123EH

Power Range from 2.65 kW to 3.5 kW

Performance		MINOR HEAT PUMP		size 93		size 123	
		Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	W	6.9-10.2	6.9-10.2	6.9-10.2	6.9-10.2	6.9-10.2	6.9-10.2
Power input	W	250-100-1130	250-90-1040	250-100-1130	250-100-1130	250-100-1130	250-100-1130
SEER / SCOP		3.21	3.62	3.21	3.61	3.21	3.61
Energy class		A	A	A	A	A	A
Running current	A	1.3-1.9-5.3	1.3-1.9-5.3	1.3-1.9-5.3	1.3-1.9-5.3	1.3-1.9-5.3	1.3-1.9-5.3
Actual energy consumption cooling (kWh)		317.1	-	343	-	-	-

Indoor Unit		SAP-KR93EH(A)		SAP-KR123EH(A)	
		size 93	size 123	size 93	size 123
Air circulation (m³/h)		400	530	530	530
Max. length (m)		1.8	1.8	1.8	1.8
Sound Power Level (dB)		35	35	37	37
Sound Pressure Level (dB(A))		25/28/31/34	25/28/31/34	26/29/32/34	26/29/32/34
Dimensions (mm)		250x250x100	250x250x100	250x250x100	250x250x100
Net weight	kg	5	5	5	5
Power supply	V, ph, Hz	230, 1~N, 50	230, 1~N, 50	230, 1~N, 50	230, 1~N, 50

Outdoor Unit		SAP-CR93EH(A)		SAP-CR123EH(A)	
		size 93	size 123	size 93	size 123
Sound Power Level (dB)		58	58	58	58
Sound Pressure Level (dB)		48	47	47	49
Dimensions (mm)		340x720x200	340x720x200	340x720x200	340x720x200
Net weight	kg	34	32	32	32
Power supply	V, ph, Hz	230, 1~N, 50	230, 1~N, 50	230, 1~N, 50	230, 1~N, 50

Refrigerant circuit		size 93		size 123	
		size 93	size 123	size 93	size 123
Tube diameter (mm)		6.35 (1/4) / 9.52 (3/8)	6.35 (1/4) / 9.52 (3/8)	6.35 (1/4) / 9.52 (3/8)	6.35 (1/4) / 9.52 (3/8)
Max. piping length (m)		15	15	15	15
Max. elevation difference (m) - 15		7	7	7	7
Chargeable piping length (m)		7.5	7.5	7.5	7.5
Amount of additional refrigerant (g/m)		12	12	12	12

Rating conditions
Cooling: indoor air temperature (27°C/80°F) DB, total heat air temperature (27°C/80°F) WB
Heating: indoor air temperature (20°C/68°F) DB, total heat air temperature (7°C/45°F) WB

Energy efficiency class	SEER	SCOP	Energy label	PRICE	
				Indoor unit price	Outdoor unit price
A++	4.2	4.2	A++	€400.00	€400.00
A+	4.0	4.0	A+	€350.00	€350.00
A	3.8	3.8	A	€300.00	€300.00



Remote control



SAP-KRV.EH(A)



SAP-CRV.EH(A)

Sanyo's DC Inverter is outstanding for its rapid cooling & heating power

- Attractive modern design
- DC-Inverter technology for precise temperature control
- Powerful start function features quickly temperature reaching
- Automatic restart function
- Auto sleep control
- Washable air filter (deodorizing filter)
- Ion freshnet
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- 24-Hour clock with on/off program timer
- Washable front panel
- Quiet operation: 23 dB-A (size 93)
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-KCR74EH • SAP-KCR94EH • SAP-KCR124EH
SAP-KCR184EH/DH • SAP-KCR224EH/DH

Power Range from 2.2 kW to 6.4 kW

Performance		CONSTANT SPEED HEAT PUMP									
		size 74		size 94		size 124		size 184		size 224	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	2.2	3.3	3.9	5.8	5.5	8.8	9.7	9.8	7.2	7.2
Power input	W	505	590	625	630	1060	1100	1460	1590	2275	2040
SEER / COP		5.0/1	3.2/1	3.4/1	3.4/1	3.2/1	3.4/1	3.2/1	3.4/1	2.9/1	3.2/1
Energy class		A	A	A	A	A	A	A	A	C	C
Running expenses / kWh		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Annual energy consumption (cooling)	kWh	240.5	-	412.5	-	340	-	300	-	1137.5	-

Indoor Unit		SAP-KCR74EH(A)		SAP-KCR94EH(A)		SAP-KCR124EH(A)		SAP-KCR184EH(A)		SAP-KCR224EH(A)	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Air circulation (l/s)		430	430	430	500	500	520	500	500	500	500
Maximum pressure (Pa)		1.2	-	1.2	-	1.2	-	2.2	-	2.2	2.2
Sound Power Level (dB-A)		47	48	48	49	52	54	53	52	56	57
Sound Pressure Level (dB-A)		32/34/36	34/37/39	34/36/38	36/39/41	38/41/43	41/44/46	40/43/45	39/42/44	43/46/48	45/48/50
Dimensions (mm)		250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100
Net weight	kg	10	10	10	10	10	10	10	10	12	12
Power supply	V, Hz, Ph	230, 1~N, 50									

Indoor Unit		SAP-CR74EH(A)		SAP-CR94EH(A)		SAP-CR124EH(A)		SAP-CR184EH(A)		SAP-CR224EH(A)	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Air circulation (l/s)		430	430	430	500	500	520	500	500	500	500
Maximum pressure (Pa)		1.2	-	1.2	-	1.2	-	2.2	-	2.2	2.2
Sound Power Level (dB-A)		47	48	48	49	52	54	53	52	56	57
Sound Pressure Level (dB-A)		32/34/36	34/37/39	34/36/38	36/39/41	38/41/43	41/44/46	40/43/45	39/42/44	43/46/48	45/48/50
Dimensions (mm)		250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100	250x250x100
Net weight	kg	10	10	10	10	10	10	10	10	12	12
Power supply	V, Hz, Ph	230, 1~N, 50									

Refrigerant circuit		size 74		size 94		size 124		size 184		size 224	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Tube diameter (mm)		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Max piping length (m)		15	15	15	15	15	15	15	15	15	15
Max elevation diff. (m)		15	15	15	15	15	15	15	15	15	15
Charged piping length (m)		15	15	15	15	15	15	15	15	15	15
Amount of additional refrigerant (g)		15	15	15	15	15	15	15	15	15	15

Operating conditions
Cooling: indoor air temperature 27°C (80°F) DB, outdoor air temperature 35°C (95°F) DB
Heating: indoor air temperature 20°C (68°F) DB, outdoor air temperature 7°C (45°F) DB

Specifications subject to change without notice



	Model and price	Price
Indoor unit price	€400.00	€400.00
Outdoor unit price	€400.00	€400.00
Set price	€800.00	€800.00



Residential

Remote control



SAP-KR..EH(A)

All you need in an attractive and compact design



SAP-CR..EH(A)

- Lightweight and compact
- Quiet mode from 25 dB-A
- Auto restart after power failure
- Wide model range available: single-phase and three-phase
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- Hot start heating system prevents any cold drafts
- Automatic cooling & heating changeover to maintain the desired temperature
- 24-hour clock with on/off program timer
- Air sweep control provide comfort in every corner
- Easy-to-clean filter prevents mold or bacteria from occurring
- Negative ion generator (size 184 & 224)
- Washable front panel
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-KCLR74E • SAP-KCLR94E • SAP-KCLR124E
SAP-KCLR184E/D • SAP-KCLR224D

Power Range from 2.2 kW to 6.4 kW

CONSTANT SPEED LOW AMBIENT						
Performance	size 74	size 94	size 124	size 184	size 224	
Capacity	2.2	2.85	3.5	5.15	6.4	
Power input	660	825	1000	1690	2275	
EER	3.21	3.21	3.21	3.21	3.21	
Energy class	A	A	A	A	C	
Running currents (ph / 2ph)	3 / 3	3 / 3	4 / 4	7 / 7.3	8 / 8	
Annual energy consumption (cooling/heat)	342.0	412.5	540	880	1127.5	
Indoor unit						
air circulation (m³/h)	430	480	520	940	980	
Max/min remote (m)	1.3	1.8	3.0	2.3	3.3	
Sound Power Level (dB-A)	42	49	52	57	58	
Sound Pressure Level (dB-A)	25/26/27/28	25/26/27/28	25/26/27/28	30/31/32/33	32/33/34/35	
Dimensions (HxWxD)	mm 225x425x100	225x425x100	225x425x100	225x190x110	225x190x110	
Net weight	kg 10	10	10	12	12	
Power supply	2 ph, N	2 ph, N	2 ph, N	2 ph, N	2 ph, N	
Outdoor unit						
Sound Power Level (dB-A)	50	50	51	57	58	
Sound Pressure Level (dB-A)	35	37	39	45	47	
Dimensions (HxWxD)	mm 345x720x250	345x720x250	345x720x250	470x850x250	470x850x250	
Net weight	kg 20	20	22	45	52	
Power supply	2 ph, N	2 ph, N	2 ph, N	2 ph, N	2 ph, N	
Refrigerant circuit						
Tube diameter (mm)	1/4	1/4	1/4	1/2	1/2	
Max piping length (m)	15	15	15	30	30	
Max elevation diff. (m)	7	7	7	7	7	
Charge piping length (m)	15	15	15	25	25	
Amount of additional refrigerant (g)	15	15	15	25	25	
Rating conditions						
Cooling indoor air temperature (°C)	26/19/16	26/19/16	26/19/16	26/19/16	26/19/16	
Heating indoor air temperature (°C)	19/16/13	19/16/13	19/16/13	19/16/13	19/16/13	



PRICE		
Indoor unit price	EUR	100.00
Outdoor unit price	EUR	100.00
Net price	EUR	200.00



Residential

Remote control



SAP-KR-E(A)

All you need in an attractive and compact design



SAP-CLR-E(A)

- Lightweight and compact
- Continuous cooling operation down to -15°C
- Quiet mode from 25 dB-A
- Auto restart after power failure
- Single-phase and three-phase models available
- Multi-functional wireless remote control with built-in temperature sensor
- Negative ion generator (size 184 & 224)
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating
- Easy-to-clean filter prevents mould or bacteria from occurring

SAP-KCR74E • SAP-KCR94E • SAP-KCR124E
SAP-KCR184E/D • SAP-KCR224E

Power Range from 2.2 kW to 6.4 kW

CONSTANT SPEED COOLING ONLY					
Performance	size 74	size 94	size 124	size 184	size 224
Capacity	2.2	2.85	3.5	5.15	6.4
Power input	865	975	1080	1680	2075
SEER	3.21	3.21	3.21	3.20	3.21
Energy class	A	A	A	C	C
Running currents (A) / 1/2" / 1/4"	3.1	3.7	4.9	7.1 / 7.3	8.0
Annual energy consumption (cooling kWh)	342.9	412.9	495	688	1127.9

Indoor Unit	SAP-KCR74E	SAP-KCR94E	SAP-KCR124E	SAP-KCR184E	SAP-KCR224E
Air circulation (m³/h)	430	530	530	940	980
Max/min (m³/h)	1.3	1.8	2.0	2.3	2.3
Sound Power Level (dB)	45 A	45	52	53	56
Sound Pressure Level (dB) (A, B, C)	25/25/21/18	25/25/21/18	25/25/21/18	32/25/20/17	32/27/21/18
Dimensions (HxWxD)	mm	255x425x100	255x425x100	255x425x100	255x425x100
Net weight	kg	10	10	12	12
Power supply	V (A, Hz)	230, 1-A, 50	230, 1-A, 50	230, 1-A, 50/60, 3-A, 50	230, 1-A, 50

Outdoor Unit	SAP-KCR74E	SAP-KCR94E	SAP-KCR124E	SAP-KCR184E	SAP-KCR224E
Sound Power Level (dB)	55 A	55	61	67	69
Sound Pressure Level (dB)	55 A	55	61	67	67
Dimensions (HxWxD)	mm	340x220x70	340x220x70	670x300x70	670x300x70
Net weight	kg	20	27	40	53
Power supply	V (A, Hz)	230, 1-A, 50	230, 1-A, 50	230, 1-A, 50/60, 3-A, 50	230, 1-A, 50

Refrigerant circuit	size 74	size 94	size 124	size 184	size 224
Tube diameter (mm) (mm)	6.35/12.7/15.8/25.4	6.35/12.7/15.8/25.4	6.35/12.7/15.8/25.4	6.35/12.7/15.8/25.4	6.35/12.7/15.8/25.4
Max piping length (m)	15	15	15	30	30
Max elevation diff. (m) (m)	5	5	5	5	5
Chargeless piping length (m)	7.5	7.5	7.5	7.5	7.5
Amount of additional refrigerant (g)	15	15	15	35	35

Operating conditions
Cooling: indoor air temperature 27°C (81°F) / outdoor air temperature 35°C (95°F) / 50% RH
Heating: indoor air temperature 20°C (68°F) / outdoor air temperature 7°C (45°F) / 50% RH



PRICE		
Indoor unit price	€	400.00
Outdoor unit price	€	400.00
Set price	€	1,200.00



Residential

Remote control



SAP-KR-E(A)

All you need in an attractive
and compact design



SAP-CR-E(A)

- Lightweight and compact
- Quiet mode from 25 dB-A
- Auto restart after power failure
- Single-phase and three-phase models available
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- Negative ion generator (size 184 & 224)
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating
- Easy-to-clean filter prevents mould or bacteria from occurring

SAP-FCRV93EH • SAP-FTCRV123EH
SAP-FTCRV184EH • SAP-FTCRV244EH

Power Range from 2.65 kW to 7.1 kW

Performance		INVERTER HEAT PUMP							
		size 93		size 123		size 184		size 244	
Capacity	kW	12.5 ¹	13.6 ²	13.5 ¹	14.2 ²	15.1 ¹	16.3 ²	17.1 ¹	18.5 ²
Power Input	kW	-	-	-	-	-	-	-	-
SEER (J/Wh)	-	-	-	-	-	-	-	-	-
Energy class	-	-	-	-	-	-	-	-	-
Running sounds	dB	-	-	-	-	-	-	-	-
Average energy costs cooling	\$/kWh	-	-	-	-	-	-	-	-

Indoor Unit		SAP-FCRV93EH	SAP-FTCRV123EH	SAP-FTCRV184EH	SAP-FTCRV244EH
Air conditioner (4)	4/5/6	-	-	-	-
Modular (1000W)	1.0/1.5/2.0	-	-	-	-
Sound Power Level (dB)	dB-A	-	-	-	-
Sound Pressure Level (dB)	dB-B	-	-	-	-
Dimensions (HxWxD)	mm	700x300x200	800x300x180	800x300x180	800x300x180
Net weight	kg	18.8	23.5	23.5	23.5
Power supply	V (ph N)	230 1~N~50	230 1~N~50	230 1~N~50	230 1~N~50

Outdoor Unit		SAP-CRV93EH	SAP-CRV123EH	SAP-CRV184EH	SAP-CRV244EH
Sound Power Level (dB)	dB-A	38	39	41	42
Sound Pressure Level (dB)	dB-B	40	41	43	44
Dimensions (HxWxD)	mm	340x750x265	340x750x265	670x900x305	740x900x320
Net weight	kg	35	35	44	59
Power supply	V (ph N)	230 1~N~50	230 1~N~50	230 1~N~50	230 1~N~50

Refrigerant circuit		size 93	size 123	size 184	size 244
Tube diameter (Nominal)	mm	6.35 (1/4) / 9.52 (3/8)	6.35 (1/4) / 9.52 (3/8)	6.35 (1/4) / 12.7 (1/2)	6.35 (1/4) / 15.88 (5/8)
Max piping length	m	15	15	30	30
Max elevation diff. (H/L)	m	7	7	15	15
Charging piping length	m	7.5	7.5	15	15
Amount of additional refrigerant	kg	15	15	25	25

Rating conditions
Cooling: Indoor air temperature 27°C (80°F) RH 50%; Outdoor air temperature 35°C (95°F) RH 50%
Heating: Indoor air temperature 20°C (68°F) Outdoor air temperature 7°C (45°F) RH 90%

Specifications subject to change without notice
Model Size 93, 123, 184 and 244 are inverter type
* Data not available at the time of publication



		PRICE	
Indoor unit price	EUR	540.00	600.00
Outdoor unit price	EUR	580.00	680.00
Set price	EUR	1,090.00	1,280.00

04900A



Residential

Remote control



SAP-FCRV93EH



SAP-FTCRV123EH

The air conditioner can either be mounted on the ceiling or placed on the floor



SAP-CRV123EH(FP)

- DC-Inverter technology for precise temperature control
- Most suitable air flow for heating operation
- Powerful & comfortable with compact design
- Lightweight and compact
- Automatic restart function
- Auto sleep control
- Powerful start function for rapid cooling/heating
- Automatic cooling & heating (changeover) to maintain the desired temperature
- Cooling & Heating operation down to -15°C (size 184 & 244)
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- 24-hour clock with on/off program timer
- Easy-to-clean filter prevents mould or bacteria from occurring
- Washable front panel
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-FCR94EH • SAP-FTCR124EH
SAP-FTCR184EH • SAP-FTCR224EH

Power Range from 2.65 kW to 6.4 kW

Performance		CONSTANT SPEED HEAT PUMP							
		size 94		size 124		size 184		size 224	
Cooling	W	2.65	3.2	3.9	4.25	5.15	5.7	6.8	7.2
Heating	W	3.2	3.9	4.25	5.15	5.7	6.8	7.2	7.2
SEER (COP)	W/W	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Energy class		A	A	A	A	A	A	A	A
Running expenses	€	3.9	3.9	3.9	3.7	3.7	3.7	3.7	3.7
Annual energy price (cooling)	€ kWh	412.5	-	517.5	-	-	-	-	-

Indoor Unit		SAP-FR94EH(A)		SAP-FTCR124EH(A)		SAP-FTCR184EH(A)		SAP-FTCR224EH(A)	
		size 94	size 124	size 184	size 224	size 184	size 224	size 224	size 224
Air circulation (l/s)	l/s	400	400	400	400	400	400	400	400
Maximum pressure (Pa)	Pa	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Sound Power Level (dB)	dB-A	54	54	54	54	54	54	54	54
Sound Pressure Level (dB)	dB-A	34-40/40	34-40/40	34-40/40	34-40/40	34-40/40	34-40/40	34-40/40	34-40/40
Dimensions (mm)	mm	700x500x200	800x500x180	800x500x180	800x500x180	800x500x180	800x500x180	800x500x180	800x500x180
Net weight	kg	18.8	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Power supply	V, Hz, Ph	230, 1-Ph, 50							

Outdoor Unit		SAP-CR94EH(A)		SAP-CR124EH(A)		SAP-CR184EH(A)		SAP-CR224EH(A)	
		size 94	size 124	size 184	size 224	size 184	size 224	size 224	size 224
Sound Power Level (dB)	dB-A	50	50	50	50	50	50	50	50
Sound Pressure Level (dB)	dB-A	47	49	49	50	50	50	50	50
Dimensions (mm)	mm	540x720x250	580x780x250	670x850x250	670x850x250	670x850x250	670x850x250	670x850x250	670x850x250
Net weight	kg	33	37	43	43	43	43	43	43
Power supply	V, Hz, Ph	230, 1-Ph, 50							

Refrigerant details		size 94		size 124		size 184		size 224	
		size 94	size 124	size 184	size 224	size 184	size 224	size 224	size 224
Refrigerant (R410A/R32)	mm	6.25/1.6 / 8.5/2.0	6.25/1.6 / 8.5/2.0	6.25/1.6 / 12.7/3.2	6.25/1.6 / 12.7/3.2	6.25/1.6 / 12.7/3.2	6.25/1.6 / 12.7/3.2	6.25/1.6 / 12.7/3.2	6.25/1.6 / 12.7/3.2
Max piping length (m)	m	15	15	30	30	30	30	30	30
Max vertical lift (m)	m	7	7	7	7	7	7	7	7
Charged piping length (m)	m	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Amount of additional refrigerant (g)	g	15	15	25	25	25	25	25	25

Operating conditions: Cooling: indoor air temperature (T_{in}) 26/19°C, outdoor air temperature (T_{out}) 35/14°C; Heating: indoor air temperature (T_{in}) 19/14°C, outdoor air temperature (T_{out}) 7/5°C.



	PRICE
Indoor unit price	€ 300.00
Outdoor unit price	€ 300.00
Net price	€ 600.00

Remote control



SAP-FR94EH(A)



SAP-FTR...EH(A)

The air conditioner can either be mounted on the ceiling or placed on the floor



SAP-CR...EH(A)

- Lightweight and compact
- Low noise design
- Auto restart after power failure
- Most suitable air flow for heating operation
- Desk: Multi-functional wireless remote control with built-in temperature sensor
- Hot start heating system prevents any cold blasts in the room
- Automatic cooling & heating: changes over to maintain the desired temperature
- 24-hour clock with on/off program timer
- Automatic flap control provide uniform air flow in the room
- Easy-to-clean filter prevents mould or bacteria from occurring
- Washable front panel
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-FCLR94E • SAP-FTCLR124E
SAP-FTCLR184E/D • SAP-FTCLR224D

Power Range from 2.65 kW to 6.4 kW

Performance		CONSTANT SPEED LINE AMOUNT			
		size 94 Cooling	size 124 Cooling	size 184 Cooling	size 224 Cooling
Capacity	kW	2.55	3.5	5.15	6.4
Power Input	W	625	1050	+	+
EER	W/W	3.71	3.41	+	+
Energy class	A	A	A	+	+
Running speed (1st / 2nd)	Hz	3.9	3.8	+	+
Average energy consumption (cooling)	W/h	12.3	12.3	+	+

Indoor Unit		SAP-FR94E(A)	SAP-FTR124E(A)	SAP-FTR184E(A)	SAP-FTR224E(A)
Refrigerant (R)	kg	4.0	5.0	+	+
Moisture removal	L/day	1.8	2.3	+	+
Sound Power Level (dB)	dB-A	54	54	+	+
Sound Pressure Level (dB)	dB-A	54.5(5)	54.5(5)	+	+
Dimensions (HxWxD)	mm	240x240x200	240x240x200	240x240x200	240x240x200
Net weight	kg	18.8	23.2	23.2	23.2
Power supply	V, Ph, Hz	230, 1~N, 50			

Indoor Unit		SAP-CLR94E(A)	SAP-CLR124E(A)	SAP-CLR184E(A)	SAP-CLR224E(A)
Sound Power Level (dB)	dB-A	54	54	57	57
Sound Pressure Level (dB)	dB-A	54	54	57	57
Dimensions (HxWxD)	mm	240x240x200	240x240x200	240x240x200	240x240x200
Net weight	kg	35	37	45	52
Power supply	V, Ph, Hz	230, 1~N, 50			

Refrigerant circuit		size 94	size 124	size 184	size 224
Tube diameter (Refrigerant)	mm	6.35(1/8) / 9.52(3/8)	6.35(1/8) / 9.52(3/8)	6.35(1/8) / 12.7(1/2)	6.35(1/8) / 15.88(5/8)
Max. piping length	m	15	15	30	30
Max. elevation difference (H - L)	m	7	7	7	7
Chargeable piping length	m	7.5	7.5	7.5	10
Amount of additional refrigerant	g	15	15	25	25

Rating conditions
Cooling: indoor air temperature (T1) 26/17°C DB, outdoor air temperature (T2) 35/24°C DB
Heating: indoor air temperature (T1) 18°C, outdoor air temperature (T2) 7°C DB, 17°C WB

Specifications subject to change without notice.
Note: Size 184 and 224 are reference size.
*Data not available at the time of publication.



		PRICE
Indoor unit price	EUR	100.00
Outdoor unit price	EUR	100.00
Set price	EUR	1,000.00



Remote control



SAP-FR94E(A)



SAP-FTR...E(A)

The air conditioner can either be mounted on the ceiling or placed on the floor



SAP-CLR...E(A)

- Low ambient function ensures continuous cooling operation even in cold region
- Lightweight and compact
- Low noise design
- Auto restart after power failure
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- 24-hour clock with on/off program timer
- Automatic flap control provides uniform air flow in the room
- Easy-to-clean filter prevents mold or bacteria from occurring
- Washable front panel
- Night set back/Economy mode function ensures gentle and saving energy cooling

SAP-FCR94E • SAP-FTCR124E
SAP-FTCR184E/D • SAP-FTCR224E

Power Range from 2.65 kW to 6.4 kW

CONSTANT SPEED CEILING ONLY					
Performance		size 94 Cooling	size 124 Cooling	size 184 Cooling	size 224 Cooling
Capacity	kW	2.55	3.8	5.15	6.4
Power input	W	525	785	1050	1310
SEER	W/W	3.21	3.41	3.41	3.41
Energy class		A	A	A	A
Running current (1/1.7/3/6)	A	2.3	3.5	4.7	5.8
Actual energy consumption (cooling) kWh		0.113	0.171	0.228	0.285

		SAP-FCR94E	SAP-FTCR124E	SAP-FTCR184E	SAP-FTCR224E
Air circulation (l/s)		400	550	750	950
Moisture removal (l/day)		1.0	1.3	1.8	2.3
Sound Power Level (dB)		48 A	54	59	64
Sound Pressure Level (dB)		36 (A)	39 (A)	43 (A)	46 (A)
Dimensions (mm)		295/295/295	355/355/355	455/455/455	555/555/555
Net weight (kg)		15.5	21.5	27.5	33.5
Power supply		2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

		SAP-FCR94E	SAP-FTCR124E	SAP-FTCR184E	SAP-FTCR224E
Sound Power Level (dB)		48 A	54	59	64
Sound Pressure Level (dB)		36 (A)	39 (A)	43 (A)	46 (A)
Dimensions (mm)		295/295/295	355/355/355	455/455/455	555/555/555
Net weight (kg)		15.5	21.5	27.5	33.5
Power supply		2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

		size 94	size 124	size 184	size 224
Refrigerant (kg)		0.5	0.7	1.0	1.3
Tube diameter (mm)		1/2"	5/8"	3/4"	1"
Max piping length (m)		15	15	20	25
Max elevation difference (m)		7	7	7	7
Chargeable piping length (m)		7.5	7.5	7.5	7.5
Amount of additional refrigerant (g)		15	15	20	25

Operating conditions: Cooling: indoor air temperature (T_{in}) 26/19/14 °C, outdoor air temperature (T_{out}) 35/25/15 °C; Heating: indoor air temperature (T_{in}) 19/14/9 °C, outdoor air temperature (T_{out}) 7/5/-5 °C.



		PRICE
Model and price	Euro	500.00
Model and price	Euro	500.00
Set price	Euro	1,000.00



Residential

Remote control



SAP-FCR94E(A)



SAP-FTCR124E(A)

The air conditioner can either be mounted on the ceiling or placed on the floor



SAP-CR124E(A)

- Lightweight and compact
- Low noise design
- Auto restart after power failure
- Sleek, Multi-functional wireless remote control with built-in temperature sensor
- 24-hour clock with on/off program timer
- Automatic flap control provides uniform air flow in the room
- Easy-to-clean filter prevents mold or bacteria from occurring
- Washable front panel
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-XCRV93EH • SAP-XCRV123EH • SAP-XCRV184EH

Power Range from 2.65 kW to 5.15 kW

WHOLE HEAT PUMP							
Performance		size 93		size 123		size 184	
		Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	12.45*	15.6*	15.5*	14.5*	15.15*	16.5*
Power input	W	-	-	-	-	-	-
EEI / COP	93/9	-	-	-	-	-	-
Energy class	-	-	-	-	-	-	-
Running expenses	A	-	-	-	-	-	-
Annual energy cons. (cooling)	kWh	-	-	-	-	-	-
Indoor Unit							
		SAP-XPV93EN		SAP-XPV123EN		SAP-XPV184EN	
Re-circulation (l/s)	9.05	-	-	-	-	-	-
Maximum flow rate	3.5m³/h	-	-	-	-	-	-
Sound Power Level (dB)	dB A	-	-	-	-	-	-
Sound Pressure Level (dB)	dB A	-	-	-	-	-	-
Dimensions (HxWxL) - Unit	mm	2965/1545/75		2965/1545/75		2965/1545/75	
Dimensions (HxWxL) - Panel	mm	545/125/732		545/125/732		545/125/732	
Net weight - Unit	kg	16.5		16.5		16.5	
Net weight - Panel	kg	2.5		2.5		2.5	
Power supply	5.0/5.76	230, 1~45, 50		230, 1~45, 50		230, 1~45, 50	
Outdoor Unit							
		SAP-OPV93WHP		SAP-OPV123WHP		SAP-OPV184EN	
Sound Power Level (dB)	dB A	50	50	50	51	51	52
Sound Pressure Level (dB)	dB A	40	47	47	48	51	52
Dimensions (HxWxL) - Unit	mm	545/125/330		545/125/330		545/125/330	
Net weight	kg	34		35		46	
Power supply	5.0/5.76	230, 1~45, 50		230, 1~45, 50		230, 1~45, 50	
Refrigerant circuit							
		size 93		size 123		size 184	
Tube diameter - Suction/Discharge	mm	6.35 (1/4) / 9.52 (3/8)		6.35 (1/4) / 9.52 (3/8)		6.35 (1/4) / 12.7 (1/2)	
Max piping length	m	15		15		15	
Max elevation diff. S/D - L/S	m	7		7		7	
Chargeable piping length	m	7.5		7.5		10	
Amount of additional refrigerant	g	15		15		20	

Rating conditions
Cooling: indoor air temperature 27°C (80°F) DB, outdoor air temperature 35°C (95°F) DB
Heating: indoor air temperature 20°C (68°F) DB, outdoor air temperature 7°C (45°F) DB

Specifications subject to change without notice.
Note: For 93, 123 and 184 are standard sizes.
*Data not available at the time of publication.



PRICE	
Indoor unit price	600.00
Outdoor unit price	600.00
Set price	1,200.00

04900



Remote control



Panel



PNR-XMRV93EH



SAP-XRV...EH

Super compact design to fit precisely
80x80 standard ceiling modules



SAP-CRV...EH(FP)

- Quick and easy installation on the ceiling
- Lightweight and compact design fit precisely into standard ceiling modules
- DC-inverter technology for precise temperature control
- Most suitable air flow for heating operation
- Lightweight and compact
- Automatic restart function
- Auto air swing control provides uniform air flow in the room
- Powerful start function for rapid cooling/heating
- Automatic cooling & heating changeover to maintain the desired temperature
- Cooling & heating operation down to -15°C (only size 184)
- The built-in drain pump performs to raise the drain pipe up to 50cm
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- 24-hour clock with on/off program timer
- Easy-to-clean filter prevents mold or bacteria from occurring
- The modern style panel can be easily removed and washed
- Quiet operation
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-XCR94EH • SAP-XCR124EH • SAP-XCR184EH

Power Range from 2.87 kW to 5.15 kW

CONSTANT SPEED HEAT PUMP							
Performance		size 94		size 124		size 184	
		Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	2.87	3.1	3.85	4.32	5.15	5.7
Power input	W	575	175	1075	1950	-	-
SEER / COP	W/W	3.28	4.3	3.4	4.28	-	-
Energy class		A	A	A	A	-	-
Running expenses	€	4.5	4.3	5.2	5.3	-	-
Annual energy price (cooling)	€ kWh	427.5	-	527.5	-	-	-

Indoor Unit		SAP-XR124EH(A)		SAP-XR184EH(A)		SAP-XR184EH	
		Cooling	120	Cooling	120	Cooling	120
Air circulation (l/s)	m³/h	1.8	-	1.8	-	1.8	-
Waterfall Vertical	mm	52	52	52	52	52	52
Sound Power Level (dB)	dB-A	32	32	32	32	32	32
Sound Pressure Level (dB)	dB-A	30/16/42	30/16/42	30/16/42	30/16/42	30/16/42	30/16/42
Dimensions (HxWxD)	mm	286x175x75	286x175x75	286x175x75	286x175x75	286x175x75	286x175x75
Dimensions (HxWxD) - Panel	mm	64x175x75	64x175x75	64x175x75	64x175x75	64x175x75	64x175x75
Net weight - Unit	kg	16.5	16.5	16.5	16.5	16.5	16.5
Net weight - Panel	kg	2.3	2.3	2.3	2.3	2.3	2.3
Power supply	V, Hz, Ph	230V, 1-Ø, 50					

Outdoor Unit		SAP-XR124EH(A)		SAP-XR184EH(A)		SAP-XR184EH	
		120	120	120	120	120	120
Sound Power Level (dB)	dB-A	47	47	47	47	47	47
Sound Pressure Level (dB)	dB-A	47	47	47	47	47	47
Dimensions (HxWxD)	mm	546x750x203	546x750x203	546x750x203	546x750x203	546x750x203	546x750x203
Net weight	kg	35	35	35	35	35	35
Power supply	V, Hz, Ph	230V, 1-Ø, 50					

Refrigerant circuit		size 94		size 124		size 184	
		4.32/1.6 / 9.52/3.6	4.32/1.6 / 9.52/3.6	4.32/1.6 / 9.52/3.6	4.32/1.6 / 9.52/3.6	4.32/1.6 / 9.52/3.6	4.32/1.6 / 9.52/3.6
Tube diameter (Suction/Discharge)	mm	12	12	12	12	12	12
Max piping length	m	7	7	7	7	7	7
Max elevation (H: 3.0 / L: 1.5)	m	7.5	7.5	7.5	7.5	7.5	7.5
Chargeable piping length	m	13	13	13	13	13	13
Amount of additional refrigerant (g)	g	-	-	-	-	-	-

Refrigerant circuit: Cooling: indoor air temperature 27°C (DB/19°C WB), outdoor air temperature 35°C (DB / 24°C WB) Heating: indoor air temperature 20°C (DB / 14°C WB), outdoor air temperature 7°C (DB / 12°C WB)

Energy efficiency class		size 94		size 124		size 184	
		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A

Energy efficiency class: Cooling: indoor air temperature 27°C (DB/19°C WB), outdoor air temperature 35°C (DB / 24°C WB) Heating: indoor air temperature 20°C (DB / 14°C WB), outdoor air temperature 7°C (DB / 12°C WB)

Energy efficiency class		size 94		size 124		size 184	
		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A

Energy efficiency class: Cooling: indoor air temperature 27°C (DB/19°C WB), outdoor air temperature 35°C (DB / 24°C WB) Heating: indoor air temperature 20°C (DB / 14°C WB), outdoor air temperature 7°C (DB / 12°C WB)

Energy efficiency class		size 94		size 124		size 184	
		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A

Energy efficiency class: Cooling: indoor air temperature 27°C (DB/19°C WB), outdoor air temperature 35°C (DB / 24°C WB) Heating: indoor air temperature 20°C (DB / 14°C WB), outdoor air temperature 7°C (DB / 12°C WB)

Energy efficiency class		size 94		size 124		size 184	
		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A
Energy efficiency class		A	A	A	A	A	A

Energy efficiency class: Cooling: indoor air temperature 27°C (DB/19°C WB), outdoor air temperature 35°C (DB / 24°C WB) Heating: indoor air temperature 20°C (DB / 14°C WB), outdoor air temperature 7°C (DB / 12°C WB)



Remote control



Panel



PNR-X99EHA



SAP-CR...EH(A)



SAP-XR...EH(A)

Super compact design to fit precisely 60x60 standard ceiling modules

- Quick and easy installation on the ceiling
- Lightweight and compact design fit precisely into standard ceiling modules
- Low noise design
- Auto restart after power failure
- Auto air saving control provides uniform air flow in the room
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- Hot start heating system prevents any cold tiles in the room
- The built-in drain pump performs to
- Automatic cooling & heating changeover to maintain the desired temperature
- 24-hour clock with on/off program timer
- Easy-to-clean filter prevents mould or bacteria from accumulating
- The modern style panel can be easily removed and washed
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-XCLR94E • SAP-XCLR124E • SAP-XCLR184E/D

Power Range from 2.87 kW to 5.15 kW

Semi-concealed 4 way constant speed type				
Performance		size 94	size 124	size 184
Cooling		Cooling	Cooling	Cooling
Capacity	kW	2.87	3.45	5.15
Power input	W	475	1075	-
SEER	W/W	3.29	3.4	-
Energy class		A	A	-
Running temperature (°C)	°C	4.5	5.2	-
Average energy class (cooling)	SEER	3.27	3.37	-

Outdoor Unit		SAP-94H04A	SAP-124H04A	SAP-184H04A
Refrigerant (kg)	kg	730	730	-
Maximum pressure	MPa	1.0	1.0	-
Sound Power Level (dB)	dB(A)	52	52	-
Sound Pressure Level (dB)	dB(A)	36/39/43	36/39/43	-
Dimensions (HxWxD)	mm	286x754x75	286x754x75	286x754x75
Dimensions (HxWxD) - Panel	mm	64x730x730	64x730x730	64x730x730
Net weight - Unit	kg	15.5	15.5	16.5
Net weight - Panel	kg	2.5	2.5	2.5
Power supply	V, Hz, Ph	230, 1~N, 50		

Outdoor Unit		SAP-94H04A	SAP-124H04A	SAP-184H04A
Sound Power Level (dB)	dB(A)	52	52	52
Sound Pressure Level (dB)	dB(A)	47	49	51
Dimensions (HxWxD)	mm	540x730x200	540x730x200	670x480x200
Net weight	kg	35	37	41
Power supply	V, Hz, Ph	230, 1~N, 50		

Indoor unit		size 94	size 124	size 184
Tube diameter (Refrigerant)	mm	6.35x4 / 9.52x3/8	6.35x4 / 9.52x3/8	6.35x4 / 12.7x1/2
Max. piping length	m	15	15	30
Max. elevation (HxL) - L	m	7	7	7
Chargeable piping length	m	7.5	7.5	7.5
Amount of additional refrigerant gas	kg	15	15	25

Notes:
Cooling indoor air temperature (27°C/80°F) (A) (Cooling outdoor temperature 35°C/95°F) (A) (SEER)
Heating indoor air temperature (20°C/68°F) (A) (Heating outdoor temperature 7°C/45°F) (A) (SEER)

Specifications subject to change without notice.
Note: Size 184 is a separate line.
Data not available at the time of publication.

PRICE			
Indoor unit price	Unit	505.00	605.00
Outdoor unit price	Unit	550.00	650.00
Set price	Unit	1,055.00	1,255.00



Remote control



Panel



PNR-XR94E/A



SAP-XR...E(A)

Super compact design to fit precisely 80x80 standard ceiling modules



SAP-CLR...E(A)

- Low ambient function ensures continuous cooling operation even in cold region
- Quick and easy installation on the ceiling
- Lightweight and compact design fit precisely into standard ceiling modules
- Low noise design
- Auto restart after power failure
- Auto air sweep control provides uniform air flow in the room
- Sleek Multi-functional wireless remote

- control with built-in temperature sensor
- The built-in drain pump performs to raise the drain pipe up to 50cm
- 24-hour clock with auto program timer
- Easy-to-clean filter prevents mould or bacteria from occurring
- The modern style panel can be easily removed and washed
- Night set back/Economy mode function ensures gentle and saving energy cooling

SAP-XCR94E • SAP-XCR124E • SAP-XCR184E/D

Power Range from 2.87 kW to 5.15 kW

CONSTANT SPEED COILING UNIT				
Performance		size 94	size 124	size 184
Capacity	kW	2.87	3.65	5.15
Power input	W	675	1075	-
SEER	W/W	3.28	3.4	-
Energy class		A	A	-
Running pressure (kPa) / 20		4.3	6.2	-
Annual energy price (cooling)	€€€	427.3	627.5	-

Outdoor Unit		SAP-XCR94E(A)	SAP-XCR124E(A)	SAP-XCR184E(A)
Air circulation (ft)	m³/s	730	730	-
Warranty (years)		5	5	-
Sound Power Level (dB)	dB-A	52	52	-
Sound Pressure Level (dB)	dB-A	36/39/43	36/39/43	-
Dimensions (HxWxD) - std	mm	206x75x175	206x75x175	206x75x175
Dimensions (HxWxD) - Panel	mm	64x730x730	64x730x730	64x730x730
Net weight - std	kg	16.3	16.3	-
Net weight - Panel	kg	2.3	2.3	-
Power supply	V, ph, Hz	230, 1-A, 50		

Outdoor Unit		SAP-XCR94E(A)	SAP-XCR124E(A)	SAP-XCR184E(A)
Sound Power Level (dB)	dB-A	52	52	52
Sound Pressure Level (dB)	dB-A	47	46	55
Dimensions (HxWxD)	mm	545x730x205	545x730x205	670x900x205
Net weight	kg	30	37	46
Power supply	V, ph, Hz	230, 1-A, 50		

Refrigerant circuit		size 94	size 124	size 184
Tube diameter (mm) (HxL)	mm	6.35x16 / 9.52x16	6.35x16 / 9.52x16	6.35x16 / 12.7x16
Max piping length	m	12	13	30
Max elevation (ft) (HxL)	m	7	7	7
Chargeless piping length	m	7.5	7.5	7.5
Amount of additional refrigerant (kg)		13	13	28

Rating conditions
Cooling: Indoor air temperature 27°C (81°F); 60% Relative humidity; Outdoor air temperature 35°C (95°F); 50% Relative humidity
Heating: Indoor air temperature 20°C (68°F); Outdoor air temperature 7°C (45°F); 60% Relative humidity

Specifications subject to change without notice
Note: Size 184 is standard size
*Data for products at the time of publication

		PRICE	
Indoor unit price	€	330.00	600.00
Outdoor unit price	€	330.00	600.00
Set price	€	1,060.00	1,200.00



Residential

Remote control



Panel



PNR-XG6HA



SAP-XR...E(A)

Super compact design to fit precisely 80x60 standard ceiling modules



SAP-CRL...E(A)

- Quick and easy installation on the ceiling
- Lightweight and compact design fit precisely into standard ceiling modules
- Low noise design
- Auto restart after power failure
- Auto air sealing control provide uniform air flow in the room
- Sleep Multi-functional wireless remote control with built-in temperature sensor
- The built-in drain pump performs to raise the drain pipe up to 30cm
- 24 hour clock with on/off program timer
- Easy-to-clean filter prevents mould or bacteria from occurring
- The modern style panel can be easily removed and washed
- Night self back/Economy mode function ensures gentle and saving energy cooling

SAP-UCRV93EH • SAP-UCRV123EH
SAP-UCRV184EH • SAP-UCRV244EH

Power Range from 2.65 kW to 7.1 kW

Performance		INVERTER HEAT PUMP							
		size 93		size 123		size 184		size 244	
Capacity	kW	12.5/17	15.5/21	15.5/21	18.5/25	18.5/25	21.5/29	21.5/29	25.5/35
Power input	W	12	15	15	18	18	21	21	25
220V/230V		12	15	15	18	18	21	21	25
Energy (24h)		12	15	15	18	18	21	21	25
Running expenses		12	15	15	18	18	21	21	25
Annual energy cons. cooling	kWh	12	15	15	18	18	21	21	25

Indoor Unit		SAP-UCRV93EH		SAP-UCRV123EH		SAP-UCRV184EH		SAP-UCRV244EH	
		size 93		size 123		size 184		size 244	
Air circulation (l/s)	m³/h	12	15	15	18	18	21	21	25
Maximum removal	l/s	12	15	15	18	18	21	21	25
External static pressure (Pa)	Pa	12	15	15	18	18	21	21	25
Sound Power Level (dB)	dB(A)	12	15	15	18	18	21	21	25
Sound Pressure Level (dB)	dB(A)	12	15	15	18	18	21	21	25
Dimensions (mm)	mm	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200
Net weight	kg	12	15	15	18	18	21	21	25
Power supply	V, Hz, Ph	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50

Outdoor Unit		SAP-UCRV93EH		SAP-UCRV123EH		SAP-UCRV184EH		SAP-UCRV244EH	
		size 93		size 123		size 184		size 244	
Sound Power Level (dB)	dB(A)	12	15	15	18	18	21	21	25
Sound Pressure Level (dB)	dB(A)	12	15	15	18	18	21	21	25
Dimensions (mm)	mm	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200	1200/1200/1200
Net weight	kg	12	15	15	18	18	21	21	25
Power supply	V, Hz, Ph	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50	220, 1-4, 50

Refrigerant circuit		size 93		size 123		size 184		size 244	
		size 93		size 123		size 184		size 244	
Cable diameter (mm)	mm	12	15	15	18	18	21	21	25
Max. piping length (m)	m	12	15	15	18	18	21	21	25
Max. vertical lift (m)	m	12	15	15	18	18	21	21	25
Charge (kg)	kg	12	15	15	18	18	21	21	25
Amount of additional refrigerant (kg)	kg	12	15	15	18	18	21	21	25

Operating conditions
Cooling: indoor air temperature 27°C (81°F) DB, outdoor air temperature 35°C (95°F) DB
Heating: indoor air temperature 21°C (70°F) DB, outdoor air temperature 7°C (45°F) DB

Specifications subject to change without notice
Note: Size 93, 123, 184 and 244 are optional sizes
Specifications subject to change without notice
Data not available at the time of publication



		PRICE	
		Indoor unit price	Outdoor unit price
Size 93	Unit	200.00	800.00
Size 123	Unit	300.00	1,000.00
Size 184	Unit	1,000.00	1,200.00

04900A



Residential

Remote control



Receiver



SAP-UCRV-EH

Top class performance of ultra-low noise level has been achieved for places which need expensive air conditioning



SAP-CRV-EH(FP)

- Unified body of 260mm height to match modern architectural standards
- The most suitable for irregular-shaped rooms
- Using the booster cable the static pressure can be increased to satisfy any ductwork need
- DC-Inverter technology for precise temperature control
- Lightweight and compact
- Automatic restart function
- Powerful start function for rapid cooling/heating
- Automatic cooling & heating changeover to maintain the desired temperature
- External electric box for quick wiring connection and easy serviceability
- Cooling & Heating operation down to -15°C (page 184 & 244)
- Sleek Multi-functional wireless remote control with built-in temperature sensor
- 24-hour clock with on/off program timer
- The included air filter is easily accessible from the bottom of the unit
- Night set back/Economy mode function ensures gentle and energy saving cooling and heating

SAP-UCR94EH • SAP-UCR124EH
SAP-UCR184EH • SAP-UCR224EH

Power Range from 2.65 kW to 6.4 kW

Performance		CONCEALED SPEED HEAT PUMP							
		size 94		size 124		size 184		size 224	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	2.65	3.2	4.5	4.62	5.15	5.2	6.4	7.2
Power input	W	380	180	1120	1200	-	-	-	-
SEER (JAP)		5.49	4.1	5.58	4.30	-	-	-	-
Energy class		A	A	A	A	-	-	-	-
Running expenses	€	4.1	3.2	5.3	5.4	-	-	-	-
Annual energy price (cooling)	€ kWh	640	380	565	520	-	-	-	-

Indoor Unit		SAP-UCR94EH(A)		SAP-UCR124EH(A)		SAP-UCR184EH		SAP-UCR224EH	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Air circulation (l/s)		475	600	1.5	600	-	-	-	-
Minimum removal	l/s/min	0.8	-	-	-	-	-	-	-
External static pressure (at standard)	Pa	49/59	-	49/59	-	-	-	-	-
Sound Power Level (dB)		54	54	54	54	-	-	-	-
Sound Pressure Level (dB)		40-43	40-43	40-43	40-43	-	-	-	-
Dimensions (mm)		266x150x271	266x150x271	386x150x271	386x150x271	-	-	-	-
Net weight	kg	30	30	30	30	-	-	-	-
Power supply	V (A/N)	230 1-A-N-50							

Outdoor Unit		SAP-UCR94EH(A)		SAP-UCR124EH(A)		SAP-UCR184EH		SAP-UCR224EH	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Sound Power Level (dB)		54	54	54	54	54	54	54	54
Sound Pressure Level (dB)		47	49	47	49	47	49	47	49
Dimensions (mm)		140x720x265	140x720x265	170x720x265	170x720x265	170x720x265	170x720x265	170x720x265	170x720x265
Net weight	kg	30	30	30	30	30	30	30	30
Power supply	V (A/N)	230 1-A-N-50							

Refrigerant circuit		size 94		size 124		size 184		size 224	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Tube diameter (mm)		6.35 (1/4) - 8.5 (3/8)	6.35 (1/4) - 8.5 (3/8)	6.35 (1/4) - 8.5 (3/8)	6.35 (1/4) - 8.5 (3/8)	6.35 (1/4) - 8.5 (3/8)	6.35 (1/4) - 8.5 (3/8)	6.35 (1/4) - 8.5 (3/8)	6.35 (1/4) - 8.5 (3/8)
Max piping length (m)		15	15	15	15	15	15	15	15
Max elevation diff. (m)		15	15	15	15	15	15	15	15
Chargeable piping length (m)		15	15	15	15	15	15	15	15
Amount of additional refrigerant (g)		15	15	15	15	15	15	15	15

Running conditions
Cooling: indoor air temperature (27°C/81°F) 40% Outdoor air temperature (37°C/99°F) 50%
Heating: indoor air temperature (27°C/81°F) 40% Outdoor air temperature (7°C/45°F) 50%

Specifications subject to change without notice.
*Data for size 184 and 224 are tentative data.
*Data not available at the time of publication.



	PRICE
Indoor unit price	€ 300.00
Outdoor unit price	€ 300.00
Set price	€ 600.00



Remote control



Receiver



SAP-UR_EH(A)

Top-class performance of ultra-low noise level has been achieved for places which need expensive air conditioning



SAP-CR_EH(A)

- Unified body of 260mm height to match modern architectural standards
- The most suitable for irregular shaped rooms
- Using the booster cable the static pressure can be increased to satisfy any ductwork need
- Auto restart after power failure
- Multi-functional infrared remote controller with built-in temperature sensor
- Hot start heating system prevents any cold blasts in the room
- External electric box for quick wiring connection and easy serviceability
- Automatic cooling & heating chargeover to maintain the desired temperature
- 24-hour clock with on/off program timer
- The included air filter is easily accessible from the bottom of the unit
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-UCLR94E • SAP-UCLR124E
SAP-UCLR184E/D • SAP-UCLR224D

Power Range from 3.07 kW to 6.4 kW

		CONSTANT SPEED LOW NOISE			
		size 94	size 124	size 184	size 224
		Cooling	Cooling	Cooling	Cooling
Capacity	kW	3.07	4.25	5.19	6.4
Power input	kW	885	1135	-	-
EER	W/W	3.49	3.78	-	-
Energy class	A	A	A	-	-
Running current (1ph/3ph)	A	6.1	8.3	-	-
Rated energy consumption (cooling)	kWh	440	565	-	-

		SAP-UCLR94E	SAP-UCLR124E	SAP-UCLR184E	SAP-UCLR224E
Indoor Unit					
Re-circulation (h)	m/h	400	600	-	-
Minimum removal	L/min	3.6	1.3	-	-
External static pressure (allowable)	Pa	40/40	40/40	-	-
Sound Power Level (dB)	dB-A	54	54	-	-
Sound Pressure Level (dB)	dB-A	40/43	40/43	-	-
Dimensions (mm)	mm	266x212x71	266x212x71	266x212x71	266x212x71
Net weight	kg	30	30	30	30
Power supply	V, ph, Hz	230, 1~N, 50			

		SAP-CLR94E/A	SAP-CLR124E/A	SAP-CLR184E/A	SAP-CLR224E/A
Indoor Unit					
Sound Power Level (dB)	dB-A	54	57	57	59
Sound Pressure Level (dB)	dB-A	42	46	46	47
Dimensions (mm)	mm	346x212x95	346x212x95	346x212x95	346x212x95
Net weight	kg	35	37	45	52
Power supply	V, ph, Hz	230, 1~N, 50			

		size 94	size 124	size 184	size 224
Refrigerant circuit					
Tube diameter (Refrigerant)	mm	6.35/12.7 • 9.52/12.7	6.35/12.7 • 9.52/12.7	6.35/12.7 • 12.7/12.7	6.35/12.7 • 12.7/12.7
Max piping length	m	15	15	30	30
Max elevation difference (S-C • H-C)	m	7	7	7	7
Charge piping length	m	7.5	7.5	15	15
Amount of additional refrigerant	g/g	15	15	25	25

Rating conditions
Cooling indoor air temperature (T₁) 26/19°C WB (Outdoor air temperature (T₂) 35/24°C WB)
Heating indoor air temperature (T₁) 19/13°C Outdoor air temperature (T₂) 7/6°C WB

Specifications subject to change without notice.
Note: Size 184 and 224 are tentative data.
Data are estimates at the time of publication.



		PRICE		
Indoor unit price	Each	505.00	405.00	
Outdoor unit price	Each	555.00	455.00	
Set price	Set	1,060.00	1,360.00	



Residential

Remote control



Receiver



SAP-UR.E(A)

Top class performance of ultra-low noise level has been achieved for places which need expensive air conditioning



SAP-CLR.E(A)

- Low ambient function ensures continuous cooling operation even in cold region
- Unified body of 266mm height to match modern architectural standards
- The most suitable for irregular shaped rooms
- Using the booster cable the static pressure can be increased to satisfy any ductwork need
- Auto restart after power failure
- Multi-functional infrared remote controller with built-in temperature sensor
- External electric box for quick wiring connection and easy service
- 24-hour clock with on/off program timer
- The included air filter is easily accessible from the bottom of the unit
- Night set back/Economy mode function ensures gentle and saving energy cooling

SAP-UCR94E • SAP-UCR124E
SAP-UCR184E/D • SAP-UCR224E

Power Range from 3.07 kW to 6.4 kW

CONSTANT SPEED DUCTING ONLY					
Performance	size 94	size 124	size 184	size 224	
Capacity	94	124	184	224	
Power input	300	420	610	810	
GSD	3/16	3/8	1/2	5/8	
Energy class	A	A	A	A	
Running current (A) / 1/3	4.1	5.5	7.8	10.2	
Actual energy consumption (kWh)	94	124	184	224	
Indoor Unit					
Air circulation (m³/h)	100	120	180	220	
Maximum distance	5.5	7.5	11	14	
External static pressure (kPa)	40/50	40/50	40/50	40/50	
Sound Power Level (dB)	40-45	40-45	40-45	40-45	
Sound Pressure Level (dB)	40-45	40-45	40-45	40-45	
Dimensions (mm)	260x260x21	260x260x21	260x260x21	260x260x21	
Net weight	20	20	20	20	
Power supply	2 pin, 1/2	2 pin, 1/2	2 pin, 1/2	2 pin, 1/2	
Outdoor Unit					
Sound Power Level (dB)	40-45	40-45	40-45	40-45	
Sound Pressure Level (dB)	40-45	40-45	40-45	40-45	
Dimensions (mm)	260x260x21	260x260x21	260x260x21	260x260x21	
Net weight	20	20	20	20	
Power supply	2 pin, 1/2	2 pin, 1/2	2 pin, 1/2	2 pin, 1/2	
Refrigerant circuit					
Tube diameter (mm)	6.35/10/12.5/15	6.35/10/12.5/15	6.35/10/12.5/15	6.35/10/12.5/15	
Max piping length	15	15	15	15	
Max elevation difference (m) - 10	7	7	7	7	
Chargeable piping length	15	15	15	15	
Amount of additional refrigerant	g/L	15	15	15	

Operating conditions
Cooling: indoor air temperature 27°C (80°F), outdoor air temperature 35°C (95°F)
Heating: indoor air temperature 20°C (68°F), outdoor air temperature 7°C (45°F)

Specifications subject to change without notice
Note: Size 184 and 224 are standard size
Note: All units are for indoor use only



	PRICE
Indoor unit price	€100.00
Outdoor unit price	€100.00
Set price	€200.00



Remote control

Receiver



SAP-UR.E(A)

Top class performance of ultra-low noise level has been achieved for places which need expensive air conditioning



SAP-CR.E(A)

- Unified body of 260mm height to match modern architectural standards
- The most suitable for irregular shaped rooms
- Using the transfer cable the static pressure can be increased to satisfy any ductwork need
- Auto restart after power failure
- Multi-functional infrared remote controller with built-in temperature sensor
- External electric box for quick wiring connection and easy service
- 24-hour clock with on/off program timer
- The included air filter is easily accessible from the bottom of the unit
- Night set back/Economy mode function ensures gentle and saving energy cooling

SAP-CMRV1424EH(C) • SAP-CMRV1924EH(C)
SAP-CMRV1934EH(C) • SAP-CMRV2444EH(C)
SAP-CMRV3144EH(C)

Power Range from 4.0 kW to 8.0 kW

Feature and Performance	IMMERGENT POWER											
	SAP-IMW1440G2		SAP-IMW1440G2		SAP-IMW1340G2		SAP-IMW1440G2		SAP-IMW1440G2		SAP-IMW1440G2	
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	9.9	12.0 (1.0)	14.4 (1.0)	12.0 (1.0)	14.4 (1.0)	2.1 (0.5)	2.4 (0.4)	2.9 (0.7)	1.0 (0.1)	1.0 (0.1)	2.4 (0.5)	2.4 (0.5)
Power input	6	1025/1	1025/1	1025/1	1025/1	1025/1	1025/1	1025/1	1025/1	1025/1	1025/1	1025/1
SEER / COP	9/10	6.32	4.98	5.39	4.21	5.20	4.71	5.40	4.30	4.04	4.04	4.01
Energy class		A	A	A	A	A	A	A	A	A	A	A
Running ampere	5	6.1	6.1	7.32	7.7	7.32	7.7	6.07	6.37	7.66	6.96	6.96
Annual energy costs (cooling)	1489	802.5	-	847.5	-	847.5	-	1000	-	802.5	-	-
Convertible units	No	-	2	-	2	-	2	-	4	-	4	-
Sound Pressure Level (N)	46.4	47	46	50	52	50	52	50	52	50	52	-
Sound Power Level (N)	46.4	-	-	-	-	-	-	-	-	-	-	-
Tube Material: Aluminum	yes	2x 8.4X1.0	-	2x 8.4X1.0	-	2x 8.4X1.0	-	2x 8.4X1.0	-	2x 8.4X1.0	-	2x 8.4X1.0
Max. piping length - Total		2x 9.52m	-	2x 9.52m	-	2x 9.52m	-	2x 9.52m	12.19m	-	2x 9.52m	12.19m
Max. piping length - per unit		30	-	30	-	30	-	40	-	40	-	40
Max. vertical lift - per unit		30	-	25	-	25	-	25	-	25	-	25
Max. vertical lift - R132 - L22		15	-	15	-	15	-	10	-	10	-	10
Charged gas piping length - Total		30	-	40	-	40	-	40	-	40	-	40
Dimensions (mm)	yes	889x190x293	-	740x800x320	-	740x800x320	-	740x800x320	-	889x190x293	-	889x190x293
Net weight	kg	42	-	63	-	63	-	65	-	65	-	67
Power supply	V, Hz, Ph	230/50	-	-	-	230/50	-	230/50	-	230/50	-	230/50

None of these three conditions were met by comparison to the small control and

Test, assembled and Performance	SAP-EMERGENCY		SAP-EMERGENCY		SAP-EMERGENCY		SAP-EMERGENCY		SAP-EMERGENCY		
	Existing	Rebuilding	Existing	Rebuilding	Existing	Rebuilding	Existing	Rebuilding	Existing	Rebuilding	
Capacity	100	7.7	5.5	2.05	5.8	3.1	4.2	5.19	6.5	7.1	8.5
Air circulation (ft ³ /min)	-	-	-	-	-	-	-	-	-	-	-
Minimum removal	1 (lb/hr)	-	-	-	-	-	-	-	-	-	-
Source Pressure Level (20.5) (dB-A)	120-125	121-123	122-124	122-124	121-126	121-124	120/120/120	120/120/121	121/121/121	120/120/120	
Source Pressure Level (20) (dB-A)	-	-	-	-	-	-	121	122	120	120	
Tube diameter (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	
Maximum flow (m ³ /hr)	-	200/225/250	200/225/250	200/225/250	200/225/250	200/225/250	200/225/250	200/225/250	200/225/250	200/225/250	
Flow type	10	-	-	-	-	-	12	-	-	-	
Flow type	10, 20, 30	-	-	-	-	-	12	-	-	-	

Setting conditions

Cooling: Initial air temperature 21°C (69.8°F), 40% (surface air temperature 20°C (68°F) (34°C (93°F))
 Heating: Initial air temperature 18°C (64.4°F), 40% (surface air temperature 17°C (62.6°F) (30°C (86°F))

Search engines collecting charge related data

*Data not presented at the time of publication.



		price	
retail unit price	£/unit	500.00	400.00
supplier unit price	£/unit	500.00	400.00
net price	£/unit	1,000.00	1,000.00



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Remote control



SAP-KIMRYL EH

A proven design that is highly efficient and energy-saving.



SAP-CMRV ETHICS

- 3 system capacities from 4.0 up to 8.0 kW
- DC-Inverter technology for precise temperature control and low start current
- Twin rotary compressor: the dual rotors revolve smoothly in a well-balanced fashion for stable and efficient performance. This also contributes to increased comfort and rapid cooling & heating, as well as the unit extra-quiet and economical operation
- A++ class efficiency on whole range, in cooling and heating operation
- Extended operating range down to -15°C in cooling (BHC models) and heating mode
- The reduced volume of the outdoor unit by 8% saves further the problem of limited installation space and does not clutter the outdoor in your home
- No-stop heating operation thanks to the exclusive hot gas bypass system by Sanyo
- Washable and reusable air clean aqua filter
- Ion generator refreshes your room with negative ions
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating
- 24-hour clock with on/off program timer

COMBINATIONS TABLE

Model No. Reference			SAP (kW/VA/VA)													
			Cooling					Total capacity		Heating					Total capacity	
			Indoor capacity (kW)							Indoor capacity (kW)						
			A	B	C	D			A	B	C	D				
Continuation of 1 phase	1 phase	10	2.2	-	-	-	2.2	2.2	2.2	2.2	-	-	-	4.4	4.4	
		15	3.3	-	-	-	3.3	3.3	3.3	3.3	-	-	-	6.6	6.6	
		20	4.4	-	-	-	4.4	4.4	4.4	4.4	-	-	-	8.8	8.8	
		25	5.5	-	-	-	5.5	5.5	5.5	5.5	-	-	-	11.0	11.0	
		30	6.6	-	-	-	6.6	6.6	6.6	6.6	-	-	-	13.2	13.2	
	2 phase	15	3.3	3.3	-	-	3.3	3.3	3.3	3.3	3.3	3.3	-	-	6.6	6.6
		20	4.4	4.4	-	-	4.4	4.4	4.4	4.4	4.4	4.4	-	-	8.8	8.8
		25	5.5	5.5	-	-	5.5	5.5	5.5	5.5	5.5	5.5	-	-	11.0	11.0
		30	6.6	6.6	-	-	6.6	6.6	6.6	6.6	6.6	6.6	-	-	13.2	13.2
		35	7.7	7.7	-	-	7.7	7.7	7.7	7.7	7.7	7.7	-	-	15.4	15.4

Model No. Reference		SAP (kW/VA/VA)															
		Cooling						Heating									
		Indoor capacity (kW)						Total capacity		Indoor capacity (kW)						Total capacity	
	A	B	C	D	E	F	kW	kVA	A	B	C	D	E	F	kW	kVA	
1 Phase	10	0.1	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	0.1	0.1
	15	0.4	-	-	-	-	-	0.4	0.4	-	-	-	-	-	-	0.4	0.4
	20	0.7	-	-	-	-	-	0.7	0.7	-	-	-	-	-	-	0.7	0.7
	25	1.0	-	-	-	-	-	1.0	1.0	-	-	-	-	-	-	1.0	1.0
	30	1.3	-	-	-	-	-	1.3	1.3	-	-	-	-	-	-	1.3	1.3
	35	1.6	-	-	-	-	-	1.6	1.6	-	-	-	-	-	-	1.6	1.6
	40	1.9	-	-	-	-	-	1.9	1.9	-	-	-	-	-	-	1.9	1.9
	45	2.2	-	-	-	-	-	2.2	2.2	-	-	-	-	-	-	2.2	2.2
	50	2.5	-	-	-	-	-	2.5	2.5	-	-	-	-	-	-	2.5	2.5
	55	2.8	-	-	-	-	-	2.8	2.8	-	-	-	-	-	-	2.8	2.8
2 Phase	15/10	0.1	0.1	-	-	-	-	0.1	0.1	0.1	0.1	-	-	-	-	0.2	0.2
	20/10	0.2	0.2	-	-	-	-	0.2	0.2	0.2	0.2	-	-	-	-	0.4	0.4
	25/10	0.3	0.3	-	-	-	-	0.3	0.3	0.3	0.3	-	-	-	-	0.6	0.6
	30/10	0.4	0.4	-	-	-	-	0.4	0.4	0.4	0.4	-	-	-	-	0.8	0.8
	35/10	0.5	0.5	-	-	-	-	0.5	0.5	0.5	0.5	-	-	-	-	1.0	1.0
	40/10	0.6	0.6	-	-	-	-	0.6	0.6	0.6	0.6	-	-	-	-	1.2	1.2
	45/10	0.7	0.7	-	-	-	-	0.7	0.7	0.7	0.7	-	-	-	-	1.4	1.4
	50/10	0.8	0.8	-	-	-	-	0.8	0.8	0.8	0.8	-	-	-	-	1.6	1.6
	55/10	0.9	0.9	-	-	-	-	0.9	0.9	0.9	0.9	-	-	-	-	1.8	1.8
	60/10	1.0	1.0	-	-	-	-	1.0	1.0	1.0	1.0	-	-	-	-	2.0	2.0
3 Phase	15/10/5	0.1	0.1	0.1	-	-	-	0.1	0.1	0.1	0.1	0.1	-	-	-	0.3	0.3
	20/10/5	0.2	0.2	0.2	-	-	-	0.2	0.2	0.2	0.2	0.2	-	-	-	0.6	0.6
	25/10/5	0.3	0.3	0.3	-	-	-	0.3	0.3	0.3	0.3	0.3	-	-	-	0.9	0.9
	30/10/5	0.4	0.4	0.4	-	-	-	0.4	0.4	0.4	0.4	0.4	-	-	-	1.2	1.2
	35/10/5	0.5	0.5	0.5	-	-	-	0.5	0.5	0.5	0.5	0.5	-	-	-	1.5	1.5
	40/10/5	0.6	0.6	0.6	-	-	-	0.6	0.6	0.6	0.6	0.6	-	-	-	1.8	1.8
	45/10/5	0.7	0.7	0.7	-	-	-	0.7	0.7	0.7	0.7	0.7	-	-	-	2.1	2.1
	50/10/5	0.8	0.8	0.8	-	-	-	0.8	0.8	0.8	0.8	0.8	-	-	-	2.4	2.4
	55/10/5	0.9	0.9	0.9	-	-	-	0.9	0.9	0.9	0.9	0.9	-	-	-	2.7	2.7
	60/10/5	1.0	1.0	1.0	-	-	-	1.0	1.0	1.0	1.0	1.0	-	-	-	3.0	3.0

Model No. Reference		Cooling						SAP (kW/VA/VA)						Heating						Total capacity (kW)	
		Indoor capacity (kW)						Total capacity (kW)		Indoor capacity (kW)											
		A	B	C	D	E	F			A	B	C	D	E	F						
Continuation of 1 phase	1 Phase	10	1.1	1.1	-	-	-	-	1.00	1.0	-	-	-	-	-	-	-	-			
		15	1.65	-	-	-	-	-	1.50	1.5	-	-	-	-	-	-	-	-			
		20	2.2	-	-	-	-	-	2.0	2.0	-	-	-	-	-	-	-	-			
		25	2.75	-	-	-	-	-	2.5	2.5	-	-	-	-	-	-	-	-			
		30	3.3	-	-	-	-	-	3.0	3.0	-	-	-	-	-	-	-	-			
		35	3.85	-	-	-	-	-	3.5	3.5	-	-	-	-	-	-	-	-			
		40	4.4	-	-	-	-	-	4.0	4.0	-	-	-	-	-	-	-	-			
		45	4.95	-	-	-	-	-	4.5	4.5	-	-	-	-	-	-	-	-			
		50	5.5	-	-	-	-	-	5.0	5.0	-	-	-	-	-	-	-	-			
		55	6.05	-	-	-	-	-	5.5	5.5	-	-	-	-	-	-	-	-			
	2 Phase	15	2.2	2.2	-	-	-	-	3.00	3.0	2.00	2.0	-	-	-	-	-	-			
		20	2.9	2.9	-	-	-	-	4.00	4.0	2.60	2.6	-	-	-	-	-	-			
		25	3.5	3.5	-	-	-	-	5.00	5.0	3.30	3.3	-	-	-	-	-	-			
		30	4.2	4.2	-	-	-	-	6.00	6.0	4.00	4.0	-	-	-	-	-	-			
		35	4.9	4.9	-	-	-	-	7.00	7.0	4.70	4.7	-	-	-	-	-	-			
		40	5.6	5.6	-	-	-	-	8.00	8.0	5.40	5.4	-	-	-	-	-	-			
		45	6.3	6.3	-	-	-	-	9.00	9.0	6.10	6.1	-	-	-	-	-	-			
		50	7.0	7.0	-	-	-	-	10.00	10.0	6.80	6.8	-	-	-	-	-	-			
		55	7.7	7.7	-	-	-	-	11.00	11.0	7.50	7.5	-	-	-	-	-	-			
		60	8.4	8.4	-	-	-	-	12.00	12.0	8.20	8.2	-	-	-	-	-	-			
	3 Phase	15	3.3	3.3	3.3	-	-	-	5.00	5.0	3.3	3.3	3.3	-	-	-	-	-			
		20	4.4	4.4	4.4	-	-	-	6.60	6.6	4.4	4.4	4.4	-	-	-	-	-			
		25	5.5	5.5	5.5	-	-	-	8.20	8.2	5.5	5.5	5.5	-	-	-	-	-			
		30	6.6	6.6	6.6	-	-	-	9.90	9.9	6.6	6.6	6.6	-	-	-	-	-			
		35	7.7	7.7	7.7	-	-	-	11.50	11.5	7.7	7.7	7.7	-	-	-	-	-			
		40	8.8	8.8	8.8	-	-	-	13.20	13.2	8.8	8.8	8.8	-	-	-	-	-			
		45	9.9	9.9	9.9	-	-	-	15.00	15.0	9.9	9.9	9.9	-	-	-	-	-			
		50	11.0	11.0	11.0	-	-	-	16.60	16.6	11.0	11.0	11.0	-	-	-	-	-			
		55	12.1	12.1	12.1	-	-	-	18.30	18.3	12.1	12.1	12.1	-	-	-	-	-			
		60	13.2	13.2	13.2	-	-	-	20.00	20.0	13.2	13.2	13.2	-	-	-	-	-			

This table contains all combinations of inverter units in the residential sector. It is subject to change without notice. SAP (kW/VA/VA) is the sum of the kW/VA/VA of all inverter units in the system.

Model No. Reference		SAP (kW/VA/VA)													
		Cooling				Total capacity				Heating				Total capacity	
		kW capacity (kW)				kVA capacity				kW capacity (kW)				kVA capacity	
		4	6	8	9	4	6	8	9	4	6	8	9	4	9
1 phase	10	2.2	-	-	-	2.2	2.2	-	-	-	-	-	-	-	-
	15	3.3	-	-	-	3.3	3.3	-	-	-	-	-	-	-	-
	20	4.4	-	-	-	4.4	4.4	-	-	-	-	-	-	-	-
	25	5.5	-	-	-	5.5	5.5	-	-	-	-	-	-	-	-
2 phase	15/15	3.3	3.3	-	-	3.3	3.3	3.3	3.3	-	-	-	-	-	-
	20/20	4.4	4.4	-	-	4.4	4.4	4.4	4.4	-	-	-	-	-	-
	25/25	5.5	5.5	-	-	5.5	5.5	5.5	5.5	-	-	-	-	-	-
	30/30	6.6	6.6	-	-	6.6	6.6	6.6	6.6	-	-	-	-	-	-
Continuation of 1 phase	35/35	7.7	7.7	-	-	7.7	7.7	7.7	7.7	-	-	-	-	-	-
	40/40	8.8	8.8	-	-	8.8	8.8	8.8	8.8	-	-	-	-	-	-
	45/45	9.9	9.9	-	-	9.9	9.9	9.9	9.9	-	-	-	-	-	-
	50/50	11.0	11.0	-	-	11.0	11.0	11.0	11.0	-	-	-	-	-	-
	55/55	12.1	12.1	-	-	12.1	12.1	12.1	12.1	-	-	-	-	-	-
	60/60	13.2	13.2	-	-	13.2	13.2	13.2	13.2	-	-	-	-	-	-

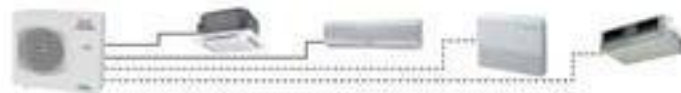
Model No. Reference		SAP (kW/VA/VA)									
		Cooling					Heating				
		max. capacity (kW)					max. capacity (kW)				
1 phase	10	15	20	25	30	10	15	20	25	30	
	2.2	3.3	4.4	5.5	6.6	2.2	3.3	4.4	5.5	6.6	
	2.5	3.7	4.9	6.1	7.3	2.5	3.7	4.9	6.1	7.3	
2 phase	10	15	20	25	30	10	15	20	25	30	
	4.4	6.6	8.8	11.0	13.2	4.4	6.6	8.8	11.0	13.2	
	5.0	7.5	10.0	12.5	15.0	5.0	7.5	10.0	12.5	15.0	
	5.5	8.3	11.1	13.9	16.7	5.5	8.3	11.1	13.9	16.7	
	6.0	9.0	12.0	15.0	18.0	6.0	9.0	12.0	15.0	18.0	
	6.6	9.9	13.2	16.5	19.8	6.6	9.9	13.2	16.5	19.8	
	7.0	10.5	14.0	17.5	21.0	7.0	10.5	14.0	17.5	21.0	
	7.5	11.3	15.1	18.9	22.5	7.5	11.3	15.1	18.9	22.5	
	8.0	12.0	16.0	20.0	24.0	8.0	12.0	16.0	20.0	24.0	
	8.3	12.5	16.7	20.8	25.0	8.3	12.5	16.7	20.8	25.0	
	8.8	13.2	17.6	21.8	26.4	8.8	13.2	17.6	21.8	26.4	
	9.0	13.5	18.0	22.5	27.0	9.0	13.5	18.0	22.5	27.0	
3 phase Continuation of 1 phase	10	15	20	25	30	10	15	20	25	30	
	6.6	9.9	13.2	16.5	19.8	6.6	9.9	13.2	16.5	19.8	
	7.0	10.5	14.0	17.5	21.0	7.0	10.5	14.0	17.5	21.0	
	7.5	11.3	15.1	18.9	22.5	7.5	11.3	15.1	18.9	22.5	
	8.0	12.0	16.0	20.0	24.0	8.0	12.0	16.0	20.0	24.0	
	8.3	12.5	16.7	20.8	25.0	8.3	12.5	16.7	20.8	25.0	
	8.8	13.2	17.6	21.8	26.4	8.8	13.2	17.6	21.8	26.4	
	9.0	13.5	18.0	22.5	27.0	9.0	13.5	18.0	22.5	27.0	
	9.9	14.9	19.9	24.9	29.7	9.9	14.9	19.9	24.9	29.7	
	10.5	15.8	21.1	26.4	31.5	10.5	15.8	21.1	26.4	31.5	
	11.0	16.5	22.0	27.5	33.0	11.0	16.5	22.0	27.5	33.0	
	11.3	16.9	22.5	28.1	33.8	11.3	16.9	22.5	28.1	33.8	
	11.7	17.4	23.2	28.9	34.7	11.7	17.4	23.2	28.9	34.7	
	12.0	17.8	23.7	29.6	35.4	12.0	17.8	23.7	29.6	35.4	
	12.5	18.4	24.5	30.6	36.8	12.5	18.4	24.5	30.6	36.8	
	13.2	19.2	25.6	31.8	38.2	13.2	19.2	25.6	31.8	38.2	
	13.5	19.6	26.1	32.3	38.9	13.5	19.6	26.1	32.3	38.9	
	14.0	20.2	26.7	32.9	39.6	14.0	20.2	26.7	32.9	39.6	
	14.9	21.2	27.9	34.2	41.1	14.9	21.2	27.9	34.2	41.1	
	15.8	22.2	29.1	35.5	42.6	15.8	22.2	29.1	35.5	42.6	
	16.5	23.0	30.0	36.3	43.6	16.5	23.0	30.0	36.3	43.6	
	17.0	23.6	30.8	36.9	44.4	17.0	23.6	30.8	36.9	44.4	
	17.6	24.2	31.4	37.4	45.1	17.6	24.2	31.4	37.4	45.1	
	18.0	24.6	31.8	37.8	45.6	18.0	24.6	31.8	37.8	45.6	
18.4	25.0	32.2	38.2	46.0	18.4	25.0	32.2	38.2	46.0		
19.0	25.6	32.9	38.9	46.8	19.0	25.6	32.9	38.9	46.8		
19.9	26.6	34.1	40.2	48.3	19.9	26.6	34.1	40.2	48.3		
20.5	27.2	34.7	40.8	48.9	20.5	27.2	34.7	40.8	48.9		
21.1	27.7	35.2	41.3	49.4	21.1	27.7	35.2	41.3	49.4		
21.7	28.3	35.8	41.9	50.0	21.7	28.3	35.8	41.9	50.0		
22.5	29.0	36.5	42.6	50.7	22.5	29.0	36.5	42.6	50.7		
23.0	29.5	37.0	43.1	51.2	23.0	29.5	37.0	43.1	51.2		
23.7	30.2	37.7	43.8	51.9	23.7	30.2	37.7	43.8	51.9		
24.0	30.5	38.0	44.1	52.2	24.0	30.5	38.0	44.1	52.2		
24.5	31.0	38.5	44.6	52.7	24.5	31.0	38.5	44.6	52.7		
25.0	31.5	39.0	45.1	53.2	25.0	31.5	39.0	45.1	53.2		
25.6	32.1	39.6	45.7	53.8	25.6	32.1	39.6	45.7	53.8		
26.1	32.6	40.1	46.2	54.3	26.1	32.6	40.1	46.2	54.3		
26.7	33.2	40.7	46.8	54.9	26.7	33.2	40.7	46.8	54.9		
27.0	33.5	41.0	47.1	55.2	27.0	33.5	41.0	47.1	55.2		
27.5	34.0	41.5	47.6	55.7	27.5	34.0	41.5	47.6	55.7		
28.0	34.5	42.0	48.1	56.2	28.0	34.5	42.0	48.1	56.2		
28.3	34.8	42.3	48.4	56.5	28.3	34.8	42.3	48.4	56.5		
28.9	35.4	42.9	49.0	57.1	28.9	35.4	42.9	49.0	57.1		
29.0	35.5	43.0	49.1	57.2	29.0	35.5	43.0	49.1	57.2		
29.5	36.0	43.5	49.6	57.7	29.5	36.0	43.5	49.6	57.7		
30.0	36.5	44.0	50.1	58.2	30.0	36.5	44.0	50.1	58.2		
30.8	37.3	44.8	50.9	59.0	30.8	37.3	44.8	50.9	59.0		
31.5	38.0	45.5	51.6	59.7	31.5	38.0	45.5	51.6	59.7		
32.0	38.5	46.0	52.1	60.2	32.0	38.5	46.0	52.1	60.2		
32.5	39.0	46.5	52.6	60.7	32.5	39.0	46.5	52.6	60.7		
33.0	39.5	47.0	53.1	61.2	33.0	39.5	47.0	53.1	61.2		
33.8	40.3	47.8	53.9	62.0	33.8	40.3	47.8	53.9	62.0		
34.0	40.5	48.0	54.1	62.2	34.0	40.5	48.0	54.1	62.2		
34.5	41.0	48.5	54.6	62.7	34.5	41.0	48.5	54.6	62.7		
35.0	41.5	49.0	55.1	63.2	35.0	41.5	49.0	55.1	63.2		
35.5	42.0	49.5	55.6	63.7	35.5	42.0	49.5	55.6	63.7		
36.0	42.5	50.0	56.1	64.2	36.0	42.5	50.0	56.1	64.2		
36.5	43.0	50.5	56.6	64.7	36.5	43.0	50.5	56.6	64.7		
37.0	43.5	51.0	57.1	65.2	37.0	43.5	51.0	57.1	65.2		
37.5	44.0	51.5	57.6	65.7	37.5	44.0	51.5	57.6	65.7		
38.0	44.5	52.0	58.1	66.2	38.0	44.5	52.0	58.1	66.2		
38.3	44.8	52.3	58.4	66.5	38.3	44.8	52.3	58.4	66.5		
38.9	45.4	52.9	59.0	67.1	38.9	45.4	52.9	59.0	67.1		
39.0	45.5	53.0	59.1	67.2	39.0	45.5	53.0	59.1	67.2		
39.5	46.0	53.5	59.6	67.7	39.5	46.0	53.5	59.6	67.7		
40.0	46.5	54.0	60.1	68.2	40.0	46.5	54.0	60.1	68.2		
40.5	47.0	54.5	60.6	68.7	40.5	47.0	54.5	60.6	68.7		
41.0	47.5	55.0	61.1	69.2	41.0	47.5	55.0	61.1	69.2		
41.5	48.0	55.5	61.6	69.7	41.5	48.0	55.5	61.6	69.7		
42.0	48.5	56.0	62.1	70.2	42.0	48.5	56.0	62.1	70.2		
42.5	49.0	56.5	62.6	70.7	42.5	49.0	56.5	62.6	70.7		
43.0	49.5	57.0	63.1	71.2	43.0	49.5	57.0	63.1	71.2		
43.5	50.0	57.5	63.6	71.7	43.5	50.0	57.5	63.6	71.7		
44.0	50.5	58.0	64.1	72.2	44.0	50.5	58.0	64.1	72.2		
44.5	51.0	58.5	64.6	72.7	44.5	51.0	58.5	64.6	72.7		
45.0	51.5	59.0	65.1	73.2	45.0	51.5	59.0	65.1	73.2		
45.5	52.0	59.5	65.6	73.7	45.5	52.0	59.5	65.6	73.7		
46.0	52.5	60.0	66.1	74.2	46.0	52.5	60.0	66.1	74.2		
46.5	53.0	60.5	66.6	74.7	46.5	53.0	60.5	66.6	74.7		
47.0	53.5	61.0	67.1	75.2	47.0	53.5	61.0	67.1	75.2		
47.5	54.0	61.5	67.6	75.7	47.5	54.0	61.5	67.6	75.7		
48.0	54.5	62.0	68.1	76.2	48.0	54.5	62.0	68.1	76.2		
48.3	54.8	62.3	68.4	76.5	48.3	54.8	62.3	68.4	76.5		
48.9	55.4	62.9	69.0	77.1	48.9	55.4	62.9	69.0	77.1		
49.0	55.5	63.0	69.1	77.2	49.0	55.5	63.0	69.1	77.2		
49.5	56.0	63.5	69.6	77.7	49.5	56.0	63.5	69.6	77.7		
50.0	56.5	64.0	70.1	78.2	50.0	56.5	64.0	70.1	78.2		
50.5	57.0	64.5	70.6	78.7	50.5	57.0	64.5	70.6	78.7		
51.0	57.5	65.0	71.1	79.2	51.0	57.5	65.0	71.1	79.2		
51.5	58.0	65.5	71.6	79.7	51.5	58.0	65.5	71.6	79.7		
52.0	58.5	66.0	72.1	80.2	52.0	58.5	66.0	72.1	80.2		
52.5	59.0	66.5	72.6	80.7	52.5	59.0	66.5	72.6	80.7		
53.0	59.5	67.0	73.1	81.2	53.0	59.5	67.0	73.1	81.2		
53.5	60.0	67.5	73.6	81.7	53.5	60.0	67.5	73.6	81.7		
54.0	60.5	68.0	74.1	82.2	54.0	60.5	68.0	74.1	82.2		
54.5	61.0	68.5	74.6	82.7	54.5	61.0	68.5	74.6	82.7		
55.0	61.5	69.0	75.1	83.2	55.0	61.5	69.0	75.1	83.2		
55.5	62.0	69.5	75.6	83.7	55.5	62.0	69.5	75.6	83.7		
56.0	62.5	70.0	76.1	84.2	56.0	62.5	70.0	76.1	84.2		
56.5	63.0	70.5	76.6	84.7	56.5	63.0	70.5	76.6	84.7		
57.0	63.5	71.0	77.1	85.2	57.0	63.5	71.0	77.1	85.2		
57.5	64.0	71.5	77.6	85.7	57.5	64.0	71.5	77.6	85.7		
58.0	64.5	72.0	78.1	86.2	58.0	64.5	72.0	78.1	86.2		
58.3	64.8	72.3	78.4	86.5	58.3	64.8	72.3	78.4	86.5		
58.9	65.4	72.9	79.0	87.1	58.9	65.4	72.9	79.0	87.1		
59.0	65.5	73.0	79.1	87.2	59.0	65.5	73.0	79.1	87.2		
59.5	66.0	73.5	79.6	87.7	59.5	66.0	73.5	79.6	87.7		
60.0	66.5	74.0	80.1	88.2	60.0	66.5	74.0	80.1	88.2		
60.5	67.0	74.5	80.6	88.7	60.5	67.0	74.5	80.6	88.7		
61.0	67.5	75.0	81.1	89.2	61.0	67.5	75.0	81.1	89.2		
61.5	68.0	75.5	81.6	89.7	61.5	68.0	75.5	81.6	89.7		
62.0	68.5	76.0	82.1	90.2	62.0	68.5	76.0	82.1	90.2		
62.5	69.0	76.5	82.6	90.7	62.5	69.0	76.5	82.6	90.7		
63.0	69.5	77.0	83.1	91.2	63.0	69.5	77.0	83.1	91.2		
63.5	70.0	77.5	83.6	91.7	63.5	70.0	77.5	83.6	91.7		
64.0	70.5	78.0	84.1	92.2	64.0	70.5					

SAP-CMRV1923GJH • SAP-CMRV2433GJH
SAP-CMRV3143GJH

Power Range from 5.6 kW to 9.0 kW

Subject and Parameters	IMMERSED BLAT PUMP					
	SAP-CHEM1400L/100H Cooling		SAP-CHEM1400L/100H Heating		SAP-CHEM1400L/100H Cooling	
Capacity	400	1,410,000 Btu/h	1,712,000 Btu/h	400	1,410,000 Btu/h	1,712,000 Btu/h
Power Input	30	21.00	21.00	2000	1900	21.00
ODP	30/30	1.70	1.66	1.00	1.01	1.69
Refrigerant	4	R-410A	R-410A	4	R-410A	R-410A
Running pressure	4	55.5	54.0	9.7	56.0	55.0
Minimum energy input, cooling	1400			1000		1400
Compressor units		4	4		4	4
Energy Efficiency Ratio (EER)	13.3	66	82	46	73	74
Seasonal Power Factor (SPF)	20.5	40	57	40	57	54
Total Evaporator / Condenser	yes	204 (200) / 204 (200)	204 (200) / 204 (200)	yes	204 (200) / 204 (200)	204 (200) / 204 (200)
Max piping length - total	11	30	30	30	30	30
Max piping length - vertical	11	30	30	30	30	30
Max refrigerant diff. (ft.)	11	30	30	30	30	30
Charging piping length - total	11	30	30	30	30	30
Service coils fitted	yes	2 (factory) / 2	2 (factory) / 2	yes	2 (factory) / 2	2 (factory) / 2
Net weight	14	50	50	210	14	50

There is no limit to the number of times you may change your selection. The selection will be final when you click on the "Submit" button.



1000

Drying: Initial at temperature 17°C, 20% RH. Final at temperature 20°C, 20% RH.
Moisture content at temperature 17°C, 20% RH. Final at temperature 17°C, 20% RH.

		PRICE	
Inner unit price	Units	200.00	800.00
Outer unit price	Units	500.00	800.00
Total price	Units	1,000.00	1,600.00



SAP-CMRV1923GJH(A)



SAP-CMRV2433GJH(A)
SAP-CMRV3143GJH(A)

A proven design that is highly efficient and energy-saving

- The Sanyo Flexi Multi range of heat pump and straight cooling multi split systems are the ideal, flexible solution for providing space and efficient air conditioning to 2, 3 or 4 areas with a single outdoor unit
- Wide choice of indoor unit style: wall mounted, floor/ceiling cassette, ducted
- DC inverter technology for precise temperature control and low start current
- High efficiency on whole range, 3

cooling and heating mode

- **No-stop heating operation** thanks to the exclusive hot gas bypass system by Sanjo
- **Turn rotary compressor**: the dual rotary revolve smoothly in a well-balanced fashion for stable and efficient performance. This also contributes to increased comfort and rapid cooling & heating, as well as the unit's safe, quiet and economical operation

- Chargeless outdoor unit, therefore no additional refrigerant needed on site
- Night set back function
- 24-hour clock with on/off program timer
- Night set back/Economy mode function ensures gentle and saving energy cooling and heating

SAP-CMRV 3-SERIE

INDOOR UNIT

Wall mounted unit		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N	
Performance		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	6.12/5.1-2	5.94/5.1-4	5.57/5.1-5	5.94/5.1-3	1.15/5.1-8	1.27/1.7-9	1.57/5.1-1	2.59/5.1-8
Air circulation (l/s)	m³/h	420	600	560	790	600	800	1100	1170
Moisture removal	L/hour	1.8	-	2.2	-	2.8	-	3.4	-
Sound Pressure Level (LWA)	dB-A	32/34/41	34/36/44	32/36/44	34/36/47	30/44/49	40/49/55	39/42/47	39/49/57
Sound Power Level (Lp)	dB-A	52	55	52	55	50	51	50	54
Tube diameter: Normal/Mini	mm	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	12.7/16
Dimensions (HxWxD)	mm	273/350/173	-	265/350/173	-	265/350/173	-	330/410/203	-
Net weight	kg	-	8.5	-	9.5	-	9.5	-	18
Power supply		230, 1~N, 50							

Ceiling mounted unit		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N	
Performance		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	6.12/5.1-2	5.94/5.1-4	5.57/5.1-5	5.94/5.1-3	1.15/5.1-8	1.27/1.7-9	1.57/5.1-1	2.59/5.1-8
Air circulation (l/s)	m³/h	600	800	560	800	600	800	1100	1200
Moisture removal	L/hour	1.8	-	2.2	-	2.8	-	3.4	-
External static pressure (LPA)	Pa	16/21/31	-	16/21/31	-	16/21/31	-	16/21/31	-
Sound Pressure Level (LWA)	dB-A	32/34/41	34/36/44	32/36/41	34/36/42	32/36/41	34/36/42	32/36/41	34/36/42
Sound Power Level (Lp)	dB-A	52	55	52	53	52	53	52	53
Tube diameter: Normal/Mini	mm	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	12.7/16
Dimensions (HxWxD)	mm	350/350/173	-	350/350/173	-	350/350/173	-	350/350/173	-
Net weight	kg	-	19	-	19	-	19	-	19
Power supply		230, 1~N, 50							

Semi concealed if any unit		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N	
Performance		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	5.12/5.1-2	5.94/5.1-4	5.12/5.1-5	5.94/5.1-3	1.15/5.1-8	1.27/1.7-9	1.57/5.1-1	2.59/5.1-8
Air circulation (l/s)	m³/h	560	790	560	790	600	800	1100	1170
Moisture removal	L/hour	1.8	-	2.2	-	2.8	-	3.4	-
Sound Pressure Level (LWA)	dB-A	32/34/41	34/36/44	32/36/41	34/36/42	32/36/41	34/36/42	32/36/41	34/36/42
Sound Power Level (Lp)	dB-A	52	55	52	53	52	53	52	53
Tube diameter: Normal/Mini	mm	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	12.7/16
Dimensions (HxWxD)	mm	265/350/173	-	265/350/173	-	265/350/173	-	265/350/173	-
Dimensions (HxWxD) - Panel	mm	640/350/730	-	640/350/730	-	640/350/730	-	640/350/730	-
Net weight - Unit	kg	-	16.5	-	16.5	-	16.5	-	16.5
Net weight - Panel	kg	-	2.5	-	2.5	-	2.5	-	2.5
Power supply		230, 1~N, 50							

Floor and Floor-Ceiling unit		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N	
Performance		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	6.12/5.1-2	5.94/5.1-4	5.57/5.1-5	5.94/5.1-3	1.15/5.1-8	1.27/1.7-9	1.57/5.1-1	2.59/5.1-8
Air circulation (l/s)	m³/h	420	600	560	790	600	800	1100	1170
Moisture removal	L/hour	1.8	-	2.2	-	2.8	-	3.4	-
Sound Pressure Level (LWA)	dB-A	32/34/41	34/36/44	32/36/41	34/36/42	32/36/41	34/36/42	32/36/41	34/36/42
Sound Power Level (Lp)	dB-A	52	55	52	53	52	53	52	53
Tube diameter: Normal/Mini	mm	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	12.7/16
Dimensions (HxWxD)	mm	350/350/173	-	350/350/173	-	350/350/173	-	350/350/173	-
Net weight	kg	-	16	-	16.5	-	16.5	-	16.5
Power supply		230, 1~N, 50							

Ceiling mounted unit		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N		SAP-CMRV12S(L)N	
Performance		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	6.12/5.1-2	5.94/5.1-4	5.57/5.1-5	5.94/5.1-3	1.15/5.1-8	1.27/1.7-9	1.57/5.1-1	2.59/5.1-8
Air circulation (l/s)	m³/h	420	600	560	790	600	800	1100	1170
Moisture removal	L/hour	1.8	-	2.2	-	2.8	-	3.4	-
External static pressure (LPA)	Pa	16/21/31	-	16/21/31	-	16/21/31	-	16/21/31	-
Sound Pressure Level (LWA)	dB-A	32/34/41	34/36/44	32/36/41	34/36/42	32/36/41	34/36/42	32/36/41	34/36/42
Sound Power Level (Lp)	dB-A	52	55	52	53	52	53	52	53
Tube diameter: Normal/Mini	mm	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	9.52/16	6.35/16	12.7/16
Dimensions (HxWxD)	mm	350/350/173	-	350/350/173	-	350/350/173	-	350/350/173	-
Net weight	kg	-	16	-	16	-	16	-	16
Power supply		230, 1~N, 50							

COMBINATIONS TABLE

Model No.		SAP-CMRV12S(L)N									
Performance		Cooling					Heating				
		Indoor capacity (kW)					Indoor capacity (kW)				
		A	B	C	D	E	A	B	C	D	E
Combinations of 1 unit	1 Room	35	45	-	-	-	1.20	1.20	-	-	-
	2 Room	35	45	-	-	-	1.20	1.20	-	-	-
	3 Room	35	45	-	-	-	1.20	1.20	-	-	-
	4 Room	35	45	-	-	-	1.20	1.20	-	-	-
	5 Room	35	45	-	-	-	1.20	1.20	-	-	-
	6 Room	35	45	-	-	-	1.20	1.20	-	-	-
	7 Room	35	45	-	-	-	1.20	1.20	-	-	-
	8 Room	35	45	-	-	-	1.20	1.20	-	-	-
	9 Room	35	45	-	-	-	1.20	1.20	-	-	-
	10 Room	35	45	-	-	-	1.20	1.20	-	-	-

Model No.		SAP-CMRV12S(L)N									
Performance		Cooling					Heating				
		Indoor capacity (kW)					Indoor capacity (kW)				
		A	B	C	D	E	A	B	C	D	E
Combinations of 1 unit	1 Room	35	45	-	-	-	1.20	1.20	-	-	-
	2 Room	35	45	-	-	-	1.20	1.20	-	-	-
	3 Room	35	45	-	-	-	1.20	1.20	-	-	-
	4 Room	35	45	-	-	-	1.20	1.20	-	-	-
	5 Room	35	45	-	-	-	1.20	1.20	-	-	-
	6 Room	35	45	-	-	-	1.20	1.20	-	-	-
	7 Room	35	45	-	-	-	1.20	1.20	-	-	-
	8 Room	35	45	-	-	-	1.20	1.20	-	-	-
	9 Room	35	45	-	-	-	1.20	1.20	-	-	-
	10 Room	35	45	-	-	-	1.20	1.20	-	-	-

Model No.		SAP-CMRV12S(L)N									
Performance		Cooling					Heating				
		Indoor capacity (kW)					Indoor capacity (kW)				
		A	B	C	D	E	A	B	C	D	E
Combinations of 1 unit	1 Room	35	45	-	-	-	1.20	1.20	-	-	-
	2 Room	35	45	-	-	-	1.20	1.20	-	-	-
	3 Room	35	45	-	-	-	1.20	1.20	-	-	-
	4 Room	35	45	-	-	-	1.20	1.20	-	-	-
	5 Room	35	45	-	-	-	1.20	1.20	-	-	-
	6 Room	35	45	-	-	-	1.20	1.20	-	-	-
	7 Room	35	45	-	-	-	1.20	1.20	-	-	-
	8 Room	35	45	-	-	-	1.20	1.20	-	-	-
	9 Room	35	45	-	-	-	1.20	1.20	-	-	-
	10 Room	35	45	-	-	-	1.20	1.20	-	-	-

SA-P51E • SA-P71E • SAP-PFR94E • SAP-PFR124E

Power Range from 1.8 kW to 3.68 kW

MINI-SPLIT TYPE			
		SA-P51E	SA-P71E
Performance		Cooling	Cooling
Capacity	kW	1.8	2.1
Power Input	W	720	780
EER	W/W	2.5	2.9
Energy class	-	C	A
Running ampere	A	3.3	3.3
Actual energy rate (cooling)	kWh	360	500
Fan speed	No	2	2
Air circulation (m³/h)	m³/h	250	310
Tubing length	m	1.5	1.5
Maximum remote con. (by cable)	12m/ft	8.45 / 27.7	1.0 / 3.0
Sound Pressure Level (SPL)	dB(A)	50/52	51/53
Dimensions (indoor)	mm	80x45x250	170x45x250
Net weight	kg	30	30
Power supply	V, Hz, N	230, 1+0, 50	

SPLIT TYPE			
		SAP-PFR94E	SAP-PFR124E
Performance		Cooling	Cooling
Capacity	kW	2.30	3.06
Power Input	W	820	1040
EER	W/W	2.82	3.21
Energy class	-	A	A
Running ampere	A	4.5	7.0
Actual energy rate (cooling)	kWh	462.5	620
Fan speed	No	2	2
Air circulation (m³/h)	m³/h	370	400
Tubing length	m	1.5	1.5
Maximum remote con. (by cable)	12m/ft	1.2	1.5
Sound Pressure Level (SPL)	dB(A)	52/52/56	52/54/57
Dimensions (indoor) - Indoor A	mm	780x450x240	780x450x240
Dimensions (indoor) - Outdoor A	mm	420x450x230	690x520x230
Net weight - Indoor unit	kg	30	34
Net weight - Outdoor unit	kg	8.5	15
Power supply	V, Hz, N	230, 1+0, 50	

Rating conditions
Cooling: indoor air temperature 27°C (80°F) ± 0.5°C, outdoor air temperature 35°C (95°F) ± 0.5°C

Specifications subject to change without notice



PRICE			
Indoor unit price	Unit	300.00	400.00
Outdoor unit price	Unit	500.00	800.00
Set price	Unit	1,200.00	1,200.00



Residential



SA-P51E



SAP-PFR124E

The best choice to give you continuous flow of cool and dry air where most needed.

- High efficiency on whole range
- Quick coupling connection for easy installation through a window or a wall (split type)
- Ozone-friendly and not flammable R410A refrigerant
- Multi-functional infrared remote controller with built-in temperature sensor (split type)
- 24-hour clock with on/off program timer
- 2 or 3 fan speeds + auto
- 3 operation modes: cool, dry, fan only
- Rotary compressor ensures silent operation
- Long piping connection the Series portless can be placed where you want
- Sleep function ensures gentle and saving energy cooling in the room

ABC-HP14

Up to 25 m² room size

ABC-HP14	
Apparatus	25
Fan speed	3
Air circulation (L/MIN)	360/12/130
Sound pressure level (L/MIN)	40-4
Power input W/MAX	75-50
Grid Filter	HEPA Filter & Activated Carbon Filter
Delay Timer	1 Hour / 2 Hour / 3 Hour
Generators (dB(A))	40-45/10-12
Height	4.1
Power supply	220, 1-Ph, 50

Specifications subject to change without notice



ANTI-ODOR AND POLLEN FILTER



NEGATIVE ION GENERATOR



3 FAN SPEEDS



TIMER



WIDE AIR INTAKE ON ALL SIDES



DESIGN FOR OPTIMUM OPERATION



ABC-HP14

Create the best atmosphere in your living room

- HEPA long-life filter removes 99% of bacteria, spores and dust
- Carbon filter ensures deodorizing power on whole air flow
- Negative ion generator makes refreshed air fill your living room with negative ions like in a forest or around a waterfall
- Quick inhaling cigarette smoke and house dust by bottom air intake
- Powerful inhaling on whole surface
- Easy-to-clean 3-stage filter can be quickly removed when necessary
- Suitable for optimum operation
- 3 position delay timer
- 3 fan-speeds + control
- Special program for removal of pollen



SANYO

SANYO Light-commercial Air Conditioners enhance the air quality in shops, restaurants and any business site

Sanyo DC-Inverter is outstanding for its rapid cooling and heating power. Their newly developed R410A heat exchangers and microcomputer have formed lightweight, compact, and highly efficient outdoor units.

The twin rotary compressor dramatically reduces vibration and noise during operation, thus ensuring quiet operation.

Up to 4 standard indoor units of different types and capacities can be operated simultaneously with a single outdoor unit.

INDEX OF PRODUCTS:

• Wall mounted PAC-I	pag. 62
• Ceiling mounted PAC-I	pag. 64
• Semi-concealed 4 way PAC-I	pag. 66
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SPW-KCR184GVH56 • SPW-KCR254GVH56/H8

Power Range from 5.0 kW to 7.1 kW

INVERTER MULTI SPLIT					
Performance	size 184			size 254	
	Cooling	Heating		Cooling	Heating
Capacity	18.0	19.0		23.7	23.0
Power input	W	1425	1716	2380	2380
SEER/SCOP	5.26	5.27		5.27	5.04
Energy class	A	B	C	B	B
Running ampere (ph 1/3ph)	A	8.4	8.9	11.7/5.9	12.2/5.9
Actual energy consumption (cooling)	kWh	12.3	-	1080	-

SPW-KCR184GVH56			SPW-KCR254GVH56		
Indoor unit	184	254	184	254	254
Max. connection (m)	30	30	30	30	30
Max. pressure (bar)	25	25	25	25	25
Sound Power Level (dB)	48	48	50	50	50
Sound Pressure Level (dB)	48	48	48	48	48
Dimensions (mm)	250x180x55	250x180x55	250x180x55	250x180x55	250x180x55
Net weight	12	12	12	12	12
Power supply	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4

SPW-KCR184GVH56			SPW-KCR254GVH56		
Indoor unit	184	254	184	254	254
Sound Power Level (dB)	48	48	50	50	50
Sound Pressure Level (dB)	48	48	48	48	48
Dimensions (mm)	250x180x55	250x180x55	250x180x55	250x180x55	250x180x55
Net weight	12	12	12	12	12
Power supply	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4

SPW-KCR184GVH56			SPW-KCR254GVH56		
Refrigerant	410A	410A	410A	410A	410A
Tube diameter (mm)	6.35/9.52/12.7	6.35/9.52/12.7	6.35/9.52/12.7	6.35/9.52/12.7	6.35/9.52/12.7
Max. piping length (m)	40	40	40	40	40
Max. riser (m) - G.L. above floor (m)	30/15	30/15	30/15	30/15	30/15
Chargeable piping length (m)	30	30	30	30	30
Amount of additional refrigerant (g)	30	30	30	30	30

Specifications subject to change without notice.
* Data not available at the time of publication.

Operating conditions:
Cooling: indoor air temperature (27°C/81°F), outdoor air temperature (35°C/95°F) / (15°C/59°F)
Heating: indoor air temperature (20°C/68°F), outdoor air temperature (7°C/45°F) / (-15°C/5°F)



		PRICE	
Indoor unit price	Each	100.00	100.00
Outdoor unit price	Each	100.00	100.00
Set price	Each	1,000.00	1,000.00

DAEWOO



Option remote controller



SPW-KR-GH56(B)



Easy installation and operation equivalent to that for a room air conditioner.

New 3-phase



SPW-KR-GH56/H8

- Two-stage compressor dramatically reduces vibration and noise during operation.
- DC-inverter control
- Wide outdoor unit range: single-phase or three phase
- Lighter and small unit makes the installation easier
- Quick start-up
- Extra quiet and energy saving
- Cooling & Heating operation down to -15°C
- Multi-functional wireless remote control with built-in temperature control
- Piping outlet in three directions
- Anti-mould filters are standard equipment
- Washable front panel

SPW-TDCR184GVH56 • SPW-TDCR254GVH56/H8
SPW-TDCR364GVH56/H8 • SPW-TDCR484GVH56/H8
SPW-TDCR604GVH56/H8

Power Range from 5.3 kW to 14.0 kW

Performance	INVERTER PAC PUMP									
	size 184		size 254		size 364		size 484		size 604	
Cooling										
Capacity	15.2	16.4	22.0	23.6	32.0	34.7	42.0	47.0	56.0	60.0
Power input	W	1850	1950	2700	3200	3900	4700	5500	6700	7200
SEER/SCOP	6.0/5.0	7.2/6.0	7.2/6.0	7.2/6.0	7.2/6.0	7.2/6.0	7.2/6.0	7.2/6.0	7.2/6.0	7.2/6.0
Energy class	A	B	C	D	E	F	G	H	I	J
Running ampere (ph / N/A)	A	8.5 / 8.0	12.8 / 11.1	12.3 / 10.2	16.3 / 13.5	19.1 / 15.8	20.3 / 17.1	25.0 / 17.9	29.4 / 22.2	34.2 / 25.8
Annual energy consumption cooling (kWh)		602.5	-	1175	-	1641	-	-	-	-

Index test	SPW-TDCR184GVH56									
	size 184		size 254		size 364		size 484		size 604	
Air circulation (m³/h)	475	780/880/940	1100/1260/1340	1600/1860/1980	1800/2100/2220	2100/2400/2520	2400/2700/2820	2700/3000/3120	3000/3300/3420	3300/3600/3720
Sound Power Level (dB)	45-4	52	55	58	61	64	67	70	73	76
Sound Pressure Level (dB)	45-4	47	49	51	53	55	57	59	61	63
Dimensions (mm)	45-4	360/360	360/360	450/450	450/450	540/540	540/540	630/630	630/630	720/720
Net weight	kg	21	25	35	45	55	65	75	85	95
Power supply	1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE

Index test	SPW-TDCR184GVH56									
	size 184		size 254		size 364		size 484		size 604	
Air circulation (m³/h)	475	780/880/940	1100/1260/1340	1600/1860/1980	1800/2100/2220	2100/2400/2520	2400/2700/2820	2700/3000/3120	3000/3300/3420	3300/3600/3720
Sound Power Level (dB)	45-4	52	55	58	61	64	67	70	73	76
Sound Pressure Level (dB)	45-4	47	49	51	53	55	57	59	61	63
Dimensions (mm)	45-4	360/360	360/360	450/450	450/450	540/540	540/540	630/630	630/630	720/720
Net weight	kg	21	25	35	45	55	65	75	85	95
Power supply	1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE	230, 1-ØN-PE

Refrigerant circuit	SPW-TDCR184GVH56									
	size 184		size 254		size 364		size 484		size 604	
Tube diameter (mm)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Max piping length (m)	40	40	40	40	40	40	40	40	40	40
Max. oil (liters)	30	30	30	30	30	30	30	30	30	30
Charging piping length (m)	30	30	30	30	30	30	30	30	30	30
Amount of additional refrigerant (g)	30	30	30	30	30	30	30	30	30	30

Specifications subject to change without notice.
*Data for reference at the time of publication.

Operating conditions:
Cooling: Indoor air temperature (°C) 26/19°C, 50% RH; Outdoor air temperature (°C) 35/24°C, 50% RH
Heating: Indoor air temperature (°C) 19/12°C, 50% RH; Outdoor air temperature (°C) 7/6°C, 50% RH



Index test price	PRICE		
	Unit	Price	Price
Indoor unit price	Each	1,000.00	400.00
Outdoor unit price	Each	1,000.00	1,000.00
Set price	Each	1,000.00	1,000.00

04900



Option remote controller



New 3-phase



SPW-CR...GVH56/H88



SPW-TDR...GH56(B)

Easy installation even in existing buildings

- Twin rotary compressor dramatically reduces vibration and noise during operation
- DC inverter control
- Wide outdoor unit range single-phase or three-phase
- All indoor units just 210mm high
- Large and wide air distribution
- Quick start up
- Most suitable for long and narrow space
- Newly developed DC fan motor for increased efficiency
- Cooling & Heating operation down to -15°C
- Industry low sound level
- Multi-functional wireless remote control with built-in temperature control
- Piping outlet in three directions
- Fresh air knockout for improved air quality

SPW-XDCR184GVH56 • SPW-XDCR254GVH56/H8
SPW-XDCR364GVH56/H8 • SPW-XDCR484GVH56/H8
SPW-XDCR604GVH56/H8

Power Range from 5.0 kW to 14.0 kW

Performance	Semi-concealed 4 way PAC-i									
	size 184		size 254		size 364		size 484		size 604	
Cooling	18.4	25.4	36.4	48.4	60.4	72.4	84.4	96.4	108.4	120.4
Heating	18.4	25.4	36.4	48.4	60.4	72.4	84.4	96.4	108.4	120.4
Capacity	5.0	7.0	10.0	14.0	18.0	24.0	30.0	36.0	42.0	48.0
Power input	8	14	21	29	37	49	60	72	84	96
EVOP	8	14	21	29	37	49	60	72	84	96
Energy class	A	A	A	A	A	A	A	A	A	A
Running ampere (1ph / 3ph)	18.4 / 6.5	25.4 / 9.0	36.4 / 13.0	48.4 / 17.0	60.4 / 21.0	72.4 / 26.0	84.4 / 30.0	96.4 / 34.0	108.4 / 38.0	120.4 / 42.0
Sound energy consumption (cooling)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Index Data	Semi-concealed 4 way PAC-i									
	size 184		size 254		size 364		size 484		size 604	
Air circulation (m³/min)	18.4	25.4	36.4	48.4	60.4	72.4	84.4	96.4	108.4	120.4
Modular control	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Sound Power Level (dB)	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4
Sound Pressure Level (dB)	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4
Dimensions (HxWxD) - 1ph	mm	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40
Dimensions (HxWxD) - 3ph	mm	254	254	254	254	254	254	254	254	254
Net weight - 1ph	kg	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
Net weight - 3ph	kg	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Power supply	1 ph, 110V									

Option Data	Semi-concealed 4 way PAC-i									
	size 184		size 254		size 364		size 484		size 604	
Sound Power Level (dB)	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4
Sound Pressure Level (dB)	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4
Dimensions (HxWxD)	mm	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40	254x404x40
Net weight	kg	40	40	40	40	40	40	40	40	40
Power supply	1 ph, 110V									

Refrigerant circuit	Semi-concealed 4 way PAC-i									
	size 184		size 254		size 364		size 484		size 604	
Tube diameter (Refrigerant)	mm	4.23 (1/4")	4.23 (1/4")	4.23 (1/4")	4.23 (1/4")	4.23 (1/4")	4.23 (1/4")	4.23 (1/4")	4.23 (1/4")	4.23 (1/4")
Max piping length	m	30	30	30	30	30	30	30	30	30
Max. max. R-410A discharge (L)	kg	30	30	30	30	30	30	30	30	30
Chargeless piping length	m	30	30	30	30	30	30	30	30	30
Amount of additional refrigerant	g	20	20	20	20	20	20	20	20	20

Specifications subject to change without notice.
Data not available at the time of publication.

Rating conditions
Cooling: indoor air temperature 27°C (80°F) DB, outdoor air temperature 35°C (95°F) DB
Heating: indoor air temperature 20°C (68°F) DB, outdoor air temperature 7°C (45°F) DB



Price		Price	
Indoor unit price	Unit	200.00	600.00
Outdoor unit price	Unit	100.00	600.00
Set price	Unit	1,000.00	1,200.00



Option remote controller



SPW-XDR...GH56(B)



New 3-phase



SPW-CR...GVH56/H8B

Optimum air distribution and easy installation put together

- Twin-rotary compressor dramatically reduces vibration and noise during operation
- DC inverter control
- Wide outdoor unit range: single-phase or three phase
- Reduced sound level
- Powerful drain pump gives 800mm lift
- Piping outlet in three directions
- Newly developed DC fan motor for increased efficiency
- Cooling & heating operation down to -15°C
- Improved air-flow to prevent shuffling effect
- Multi-functional wireless remote control with built-in temperature control
- Easy fine adjustment of the body suspension height
- Fresh air knockout for improved air quality

SPW-UCR184GVH56 • SPW-UCR254GVH56/H8
SPW-UCR364GVH56/H8 • SPW-UCR484GVH56/H8
SPW-UCR604GVH56/H8

Power Range from 5.0 kW to 14.0 kW

Performance	INVERTER MULTI PUMP									
	size 184		size 254		size 364		size 484		size 604	
Cooling	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	18.0	18.0	25.0	25.0	36.0	36.0	48.0	48.0	60.0	60.0
Power input	5.0	10.0	7.0	14.0	10.0	20.0	14.0	28.0	20.0	40.0
SEER/COP	4.71	3.26	4.85	3.38	4.85	3.38	4.85	3.38	4.85	3.38
Energy class	A	B	A	B	A	B	A	B	A	B
Running ampere (A) / 1ph	5.7	5.1	13.1/4.6	12.7/4.4	11.1/4.7	10.8/3.9	21.1/7.8	20.7/7.5	17.1/6.3	16.7/5.9
Rated energy consumption cooling (kWh)	0.57	-	0.85	-	1.00	-	1.33	-	1.67	-

Basic Data	INVERTER MULTI PUMP									
	size 184		size 254		size 364		size 484		size 604	
As installation (mm)	400	400	400	400	400	400	400	400	400	400
Maximum pressure (kPa)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ex. static pressure (kPa)	40	40	40	40	40	40	40	40	40	40
Sound Power Level (dB)	55	55	55	55	55	55	55	55	55	55
Sound Pressure Level (dB)	45	45	45	45	45	45	45	45	45	45
Dimensions (mm)	400	400	400	400	400	400	400	400	400	400
Net weight	10	10	10	10	10	10	10	10	10	10
Power supply	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4

Basic Data	INVERTER MULTI PUMP									
	size 184		size 254		size 364		size 484		size 604	
Sound Power Level (dB)	55	55	55	55	55	55	55	55	55	55
Sound Pressure Level (dB)	45	45	45	45	45	45	45	45	45	45
Dimensions (mm)	400	400	400	400	400	400	400	400	400	400
Net weight	10	10	10	10	10	10	10	10	10	10
Power supply	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4	1/2/3/4

Refrigerant circuit	INVERTER MULTI PUMP									
	size 184		size 254		size 364		size 484		size 604	
Circuit diameter (mm)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Max piping length (m)	40	40	40	40	40	40	40	40	40	40
Max. air (m³/min) (max/min)	30/15	30/15	30/15	30/15	30/15	30/15	30/15	30/15	30/15	30/15
Chargeable piping length (m)	30	30	30	30	30	30	30	30	30	30
Amount of additional refrigerant (kg)	0	0	0	0	0	0	0	0	0	0

See Bulletin board for charge and oil note.
(Does not appear at the time of publication)

Rating conditions
Cooling: indoor air temperature 27°C (80°F) DB, outdoor air temperature 35°C (95°F) DB
Heating: indoor air temperature 20°C (68°F) DB, outdoor air temperature 7°C (45°F) DB



Model and price	PRICE	
	Unit price	Set price
SPW-UCR184GVH56	100,000	100,000
SPW-UCR254GVH56/H8	100,000	100,000
SPW-UCR364GVH56/H8	1,000,000	1,000,000

04900



Option remote controller



SPW-URL-GH56(B)

Ideal solution for flexible and concealed air distribution to realize comfortable space



SPW-CR-GVH56/H8B

- Twin-relay compressor dramatically reduces vibration and noise during operation.
- DC-Inverter control.
- Wide outdoor unit range: single-phase or three-phase.
- Extremely quiet operation from 25 (dB-A).
- High static pressure available.
- Integrated drain pump gives 70mm H₂O.
- Easy maintenance and serviceability by external installation of the electric box.
- Standard 250mm spigots ensure simple connection to ductwork.
- Cooling & Heating operation down to -15°C.
- Air off sensor avoids cold air dumping.
- Multi-functional wireless remote control with built-in temperature control.
- Piping outlet in three direction.
- Fresh air knockout for improved air quality.

SPW-DC0705H8 • SPW-DC0905H8

Power Range from 20.0 kW to 25.0 kW

CONSTANT SPEED HEAT PUMP					
Performance		Cooling		Heating	
Capacity	kW	20.0	22.4	25.0	28.9
Power input	kW	7.10	7.70	5.80	5.70
COP/EER		2.83	2.94	4.38	5.07
Running currents	A	14.6	15.2	27.1	27.2

Outdoor Unit			
Refrigerant (R410A)	kg	2.00/1.40/2.00	2.00/1.40/2.00
Maximum velocity	m/s	8.4	11.2
External static pressure (Pa)	Pa	170	210
Sound Power Level (dB)	dB(A)	68	71
Sound Pressure Level (dB)	dB(A)	40-47	41-50
Dimensions (mm)	mm	467/1420/120	467/1420/120
Net weight	kg	110	120
Power supply	V, Hz, Ph	230, 1-Ø, 50	

Outdoor Unit			
Refrigerant (R410A)	kg	2.00	2.00
Maximum velocity	m/s	8.4	11.2
External static pressure (Pa)	Pa	170	210
Sound Power Level (dB)	dB(A)	68	71
Sound Pressure Level (dB)	dB(A)	40-47	41-50
Dimensions (mm)	mm	467/1420/120	467/1420/120
Net weight	kg	110	120
Power supply	V, Hz, Ph	230, 1-Ø, 50	

Indoor Unit			
Tube diameter	mm	12.7 (1/2")	12.7 (1/2")
Max piping length	m	120	120
Max elev. diff. (m) (allowable)	m	50 / 30	50 / 30
Chargeable piping length	m	30	30
Amount of additional refrigerant	g/m	80	80

Specified indoor unit to be used without modification

Operating conditions
Cooling: Indoor air temperature 27°C (80°F), Outdoor air temperature 35°C (95°F) ± 1°C (5°F)
Heating: Indoor air temperature 20°C (68°F), Outdoor air temperature 7°C (45°F) ± 1°C (5°F)



Price		
Model and price	Unit	Unit
SPW-DC0705H8	Unit	Unit
SPW-DC0905H8	Unit	Unit

R410A



SPW-D...H



SPW-C...H8



Option remote controller

Powerful and compact design for easier installation in any commercial space

- High static pressure available for optimum air distribution
- Low noise design
- R410A refrigerant
- Highly efficient scroll compressor
- Piping length up to 120m
- Cooling & Heating operation down to -15°C
- Air off sensor avoids cold air dumping
- Multi-functional wireless remote control with built-in temperature control
- Piping outlet in three directions
- Fresh air knockout for improved air quality

COMBINATIONS

Outdoor Unit	Performance		Indoor Unit	
	Cooling	Heating	Fan	HP
SPW-CHX40GSHS- INVERTER MODEL	27.1	15.8	128 G2	-
SPW-CHX40GSHS- INVERTER MODEL	18.0	11.2	128 G2	-
SPW-CHX40GSHS- INVERTER MODEL	12.5	14.0	204 G2	128 M
SPW-CHX40GSHS- INVERTER MODEL	14.0	16.0	194 G2	128 M
SPW-CHX40- CONSTANT SPEED MODEL	25.0	23.4	364 G2	204 M
SPW-CHX40- CONSTANT SPEED MODEL	25.0	25.0	404 G2	204 M

Indoor Unit	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS
Air circulation (m³/s)	47.5	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0
Sound Power Level (dB)	48.4	46	46	46	46
Sound Pressure Level (dB)	48.4	30.0/32	30.0/32	30.0/32	30.0/32
Dimensions (mm)	mm	2000/1500	2000/1500	2000/1500	2000/1500
Net weight	kg	12	12	12	12

Indoor Unit	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS
Air circulation (m³/s)	47.5	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0
Sound Power Level (dB)	48.4	46	46	46	46	46
Sound Pressure Level (dB)	48.4	30.0/32	30.0/32	30.0/32	30.0/32	30.0/32
Dimensions (mm)	mm	2000/1500	2000/1500	2000/1500	2000/1500	2000/1500
Net weight	kg	12	12	12	12	12

Indoor Unit	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS
Air circulation (m³/s)	47.5	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0
Sound Power Level (dB)	48.4	46	46	46	46	46
Sound Pressure Level (dB)	48.4	30.0/32	30.0/32	30.0/32	30.0/32	30.0/32
Dimensions (mm)	mm	2000/1500	2000/1500	2000/1500	2000/1500	2000/1500
Net weight	kg	12	12	12	12	12

Indoor Unit	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS
Air circulation (m³/s)	47.5	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0
Sound Power Level (dB)	48.4	46	46	46	46	46
Sound Pressure Level (dB)	48.4	30.0/32	30.0/32	30.0/32	30.0/32	30.0/32
Dimensions (mm)	mm	2000/1500	2000/1500	2000/1500	2000/1500	2000/1500
Net weight	kg	12	12	12	12	12

Indoor Unit	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS
Air circulation (m³/s)	47.5	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0
Sound Power Level (dB)	48.4	46	46	46	46	46
Sound Pressure Level (dB)	48.4	30.0/32	30.0/32	30.0/32	30.0/32	30.0/32
Dimensions (mm)	mm	2000/1500	2000/1500	2000/1500	2000/1500	2000/1500
Net weight	kg	12	12	12	12	12

Indoor Unit	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS
Air circulation (m³/s)	47.5	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0
Sound Power Level (dB)	48.4	46	46	46	46	46
Sound Pressure Level (dB)	48.4	30.0/32	30.0/32	30.0/32	30.0/32	30.0/32
Dimensions (mm)	mm	2000/1500	2000/1500	2000/1500	2000/1500	2000/1500
Net weight	kg	12	12	12	12	12

Indoor Unit	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS	SPW-CHX40GSHS
Air circulation (m³/s)	47.5	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0	120.0/140.0
Sound Power Level (dB)	48.4	46	46	46	46	46
Sound Pressure Level (dB)	48.4	30.0/32	30.0/32	30.0/32	30.0/32	30.0/32
Dimensions (mm)	mm	2000/1500	2000/1500	2000/1500	2000/1500	2000/1500
Net weight	kg	12	12	12	12	12

Specifications subject to change without notice

Rating conditions
 Cooling: Indoor air temperature 27°C DB/19°C WB
 Outdoor temperature 35°C DB - 24°C WB
 Heating: Indoor air temperature 19°C DB
 Outdoor air temperature 7°C DB - 6°C WB

Declaration under the European
 SPW-CHX40GSHS (Power 15.0 kW)
 SPW-CHX40GSHS (Power 15.0 kW)



SPW-KRL-GH56(B)



SPW-TDR-GH56(B)



SPW-XMR-EH56(B)



SPW-FTR-EH56(B)



SPW-UMR-EH56(B)



SPW-XDR-GH56(B)



SPW-URL-GH56(B)



SPW-URL-GH56(B)



SPW-XDR-GH56(B)



SPW-URL-GH56(B)

Option remote controller







SPW-CR-GH56(B)

Versatile and economical solution for air conditioning irregular-shaped areas

- Up to 4 standard indoor units of different types and capacities can be operated simultaneously with a single outdoor unit.
- Twin rotary compressor with DC-Inverter control (in 795 and 995 models).
- All indoor units can operate in a single mode.
- Multi-functional wireless remote control with built-in temperature sensor.
- Compact outdoor units ensure easy installation and space saving.
- Low noise design.





Sanyo control equipment meets the needs of variety of customers

(for a description of the control systems refer to section VRF page 110)

Operation system	Individual control system			Three operation
Basic	Normal operation	Operation from each unit	Quick and easy operation	Daily and weekly program
External appearance				
Type model name	Three-wire remote control RCS-700000	Wireless remote control RCS-400000 (NLS) RCS-400000 (NLS) RCS-400000 (NLS) RCS-400000 (NLS) RCS-400000 (NLS)	Simplified remote control RCS-400000	Schedule timer SMA-700000
N. of air. units which can be controlled	1 group, 8 units	1 group, 8 units	1 group, 8 units	64 groups, max. 64 units
Location of use	• Up to 2 units can be connected per group	• Up to 2 units can be connected per group	• Up to 2 units can be connected per group	• Power supply from the system controller • In case of no system controller, possibility of connection to the T12 terminal of an indoor unit
Connectable indoor unit	4 series indoor unit	4 series indoor unit	4 series indoor unit	3 series indoor unit 4 series indoor unit

Function	ON/OFF	On/Off	On/Off	On/Off
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○

○ Operation with the system "On/Off" (for the system "On/Off" refer to page 110)

Operation system	Individual control system			
Basic	Operation with different functions from each station	Daily ON/OFF operation from each station	Simplified charge ratio for each indoor	
			Each indoor panel	Personal computer (data master)
External appearance				
Type model name	System controller SMA-400000	ON/OFF controller SMA-400000	Intelligent controller SMA-400000	Communication adapter SMA-400000
N. of air. units which can be controlled	64 groups, max. 64 units	16 groups, max. 16 units	64 units in 4 systems, max. 256 units	2 systems, max. 128 units
Use restriction	• Up to 16 units can be connected to one system • Each indoor unit is 1 inch unit • 1 inch unit connection is possible • Possibility of use • Use without remote controller is possible	• Up to 16 units in 16 systems • Each indoor unit is 1 inch unit • 1 inch unit connection is possible • Possibility of use • Use without remote controller is possible	• Communication adapter (SMA-400000) required for each indoor unit	
Connectable indoor unit	3 series indoor unit 4 series indoor unit	2 series indoor unit 4 series indoor unit	3 series indoor unit 4 series indoor unit	3 series indoor unit 4 series indoor unit

Function	ON/OFF	On/Off	On/Off	On/Off
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○
On/Off	○	○	○	○

○ Operation with the system "On/Off" (for the system "On/Off" refer to page 110)



SANYO

SANYO Variable Refrigerant Flow systems
a powerful range perfect for shopping centres,
hotels, offices and hospitals

Full range based on ozone-friendly R410A refrigerant ensure high performances to create a comfortable living space under different demands. The ECO-i series is designed for energy saving, easy installation and high efficiency, using electrical supply as main power source.

The Sanyo GHP (gas engine driven heat pump) uses clean burning natural gas for high efficiency operation with very limited use of electrical power. Since it is designed to work combined with water piping, the Sanyo GHP offers a practical and efficient way to renew an existing air-conditioning system.

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SPW-CR365GXH56/H8 • SPW-CR485GXH56/H8
SPW-CR605GXH56/H8

Power Range from 11.2 kW to 15.5kW

Model name	Power supply capacity	Unit	SPW-CR365GXH56/H8		SPW-CR485GXH56/H8		SPW-CR605GXH56/H8	
			Cooling	Heating	Cooling	Heating	Cooling	Heating
EER	Cooling	SPW365	36.2	47.8	48.0	60.0	60.0	75.0
	Heating	SPW365	42.0	36.0	48.0	60.0	60.0	75.0
SEER	Cooling	SPW365	4.8	4.8	4.8	4.8	4.8	4.8
	Heating	SPW365	4.8	4.8	4.8	4.8	4.8	4.8
COP	Cooling	SPW365	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)
	Heating	SPW365	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)	5.37 (1.1)
Power input	Cooling	SPW365	6.7	8.9	9.0	11.2	11.2	13.8
	Heating	SPW365	8.9	6.7	11.2	9.0	11.2	13.8
Power output	Cooling	SPW365	11.2	14.5	14.5	18.0	18.0	22.5
	Heating	SPW365	14.5	11.2	18.0	14.5	18.0	22.5
Water weight	Cooling	SPW365	12.0	12.0	12.0	12.0	12.0	12.0
	Heating	SPW365	12.0	12.0	12.0	12.0	12.0	12.0
Quantity of refrigerant at shipment	Cooling	SPW365	1.0	1.0	1.0	1.0	1.0	1.0
	Heating	SPW365	1.0	1.0	1.0	1.0	1.0	1.0
Piping connection	Cooling	SPW365	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
	Heating	SPW365	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Maximum capacity	Cooling	SPW365	36.2	47.8	48.0	60.0	60.0	75.0
	Heating	SPW365	42.0	36.0	48.0	60.0	60.0	75.0
Power input	Cooling	SPW365	6.7	8.9	9.0	11.2	11.2	13.8
	Heating	SPW365	8.9	6.7	11.2	9.0	11.2	13.8
Water output	Cooling	SPW365	12.0	12.0	12.0	12.0	12.0	12.0
	Heating	SPW365	12.0	12.0	12.0	12.0	12.0	12.0

Rating conditions
Cooling: indoor air temperature 27°C DB/19°C WB, outdoor air temperature 35°C DB - 24°C WB
Heating: indoor air temperature 20°C DB, outdoor air temperature 7°C DB - 6°C WB

Independent piping length	SPW365		SPW485		SPW605	
	Cooling	Heating	Cooling	Heating	Cooling	Heating
Maximum number of connected indoor units	8	8	8	8	8	8
Indoor/indoor unit piping length	150 m	150 m	150 m	150 m	150 m	150 m
Maximum indoor piping length	150 m	150 m	150 m	150 m	150 m	150 m
Maximum outdoor piping length	150 m	150 m	150 m	150 m	150 m	150 m
Maximum distance between indoor unit	150 m	150 m	150 m	150 m	150 m	150 m
Maximum distance between outdoor unit	150 m	150 m	150 m	150 m	150 m	150 m
Maximum distance between indoor and outdoor unit	150 m	150 m	150 m	150 m	150 m	150 m

Distribution unit (SU) size	Model name		Cooling capacity after unit
	SPW365	SPW485	
For indoor unit	1/2"	1/2"	1/2"



SPW-CR_H56(B)/H8

- Top class COP+ 4.56 (in case of 4HP cooling)
- DC Inverter Compressor and Fan
- 8 indoor units can be connected to 1 outdoor unit (in case of 8HP)
- Wide model range: single phase and three phase
- It is possible to perform cooling operation at outdoor temperatures down to -18°C
- Piping length is extended to 150m
- Indoor units are the same as those of ECO-i Series



SPW-C0705DXHB • SPW-C0905DXHB • SPW-C1155DXHB
SPW-C1305DXHB • SPW-C1405DXHB

Power Range from 22.4 kW to 135 kW

[illegible][illegible]

Maximum number of treatment sessions (n)	5	Maximum actual playing length	120 min
Maximum MP of combined sessions (n)	20 MP	Maximum mean efficiency score within and a band	50 MP to 55
Maximum number of consecutive follow-up sessions (n)	50	Maximum time playing length	300 min
Maximum follow-up capacity (n)	50, 100%		

Selling conditions

Estimation used in this study	Model name	Estimating capacity after joint
For within group	SPSS (1998)	100.0000
	SPSS (2004)	71.4286 - 90.0000
For within with	SPSS (1998)	88.5714 - 100.0000
	SPSS (2004)	60.0000
	SPSS (2008)	66.6667 - 100.0000



New

The ECO-i S-series is designed for energy savings, easy installation and high efficiency. Always keeping to evolving, Sanyo uses advanced technologies to meet the requirements of different situations and Aid in the creation of comfortable living spaces.

- Top class COP=3.90 (in case of 5kW)
- Two rotary DC inverter compressor
- Wide range of product for narrow installation space
- DC fan motor
- New 12 & 16HP
- It is possible to perform cooling operation at outdoor temperature down to -12°C

The advanced technology of ECO-i 2-WAY MULTI



Outdoor units have been unified in a body of the same size and construction of the type. It allows a neat fit even when several units are installed and space savings in the top class of the industry have been realized.

Improved operation efficiency
In addition to the development of a new DC fan motor with high output and high efficiency, the output loss has been reduced by reducing the resistance of the fan guard. It contributes widely to COP increasing.

The constant-speed compressor adopts a high-performance lower high-pressure scroll. In comparison with the conventional low-pressure scroll, the oil behavior is stabilized. COP is improved and the reliability is also improved.

Improvement of the heat exchanger
Heatpipes with a diameter of 7 mm are used for the heat exchanger and the radiation area has been increased. In addition, the air speed distribution has been improved by 4 direction outdoor and the COP has also been improved.

Review of the layout of the structural parts
Noise reduction has been realized by arranging the compressor in a special machine room at the bottom.

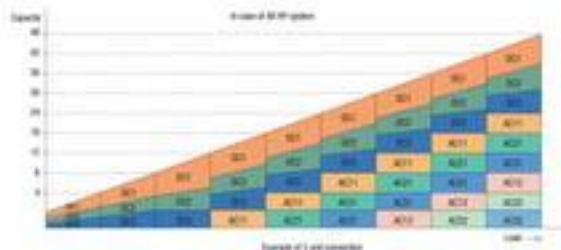
Close side-by-side installation is possible
The mounting fitting for the outdoor unit has been changed to front and back, so that the units can be installed side by side with just 100 mm between units and reduction of the installation space has been realized.

Smooth capacity control from 0.8 HP to 48 HP

By combination of a DC inverter compressor with a constant-speed compressor, the high harmonics generated by the DC inverter are suppressed to a minimum.
For all units of 8, 16, 12, 14 and 18 HP, a DC inverter and a constant-speed compressor both are installed. Correspondence to capacity control, difficult with a constant-speed compressor, is possible smoothly with a DC inverter. The performance difference at the time of start of a constant-speed compressor also is eliminated.

Comp. HP	Unit 1 (main)	Unit 2 (sub-1)	Unit 3 (sub-2)
DC comp.	4.0	4.0	5.0
AC comp.	4.0	4.0	5.0
AC comp.	4.0	4.0	5.0

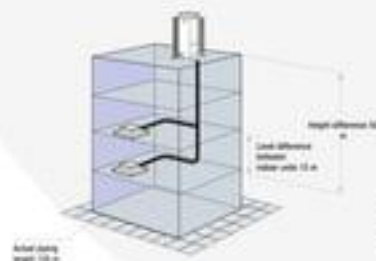
(Unit 1 and 2 are connected)



Example of 1 unit connection

Unit 1

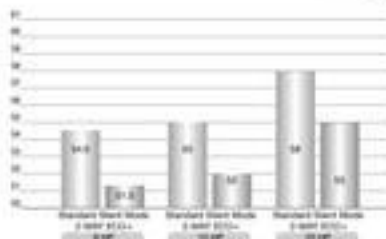
Correspondence to long piping in the top class of the industry



The reduction in the refrigerant volume by piping size down has extended the piping length to an actual length of 150 m and a total length of 300 m, the top class in the industry. The possible installation area for indoor and outdoor units has been widened and system deployment with a high degree of freedom has become possible.

Actual piping length 100 m → 150 m
Equivalent piping length 120 m → 175 m
Total piping length 150 m → 300 m

Low-operating sound design in the top class of the industry

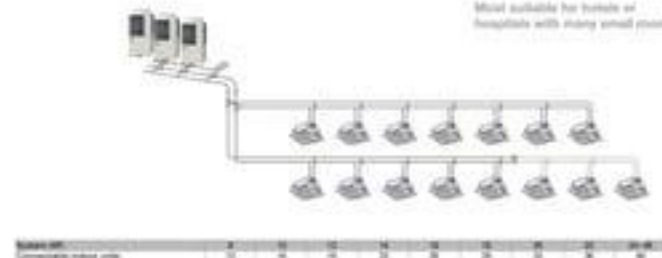


Noise reduction has been realized by using of large-diameter plastic fans and low-noise plastic grilles.

- A silent function has been provided, making possible a further reduction of 3 dB (A).
- The outdoor fan speed can be used only also switching to silent mode from the outdoor remote control unit.

The total capacity cannot be performed in silent mode.

Increased max. number of connectable indoor units



Mixed available for hotels or hospitals with many small rooms.



SPW-CR704GDZH8 • SPW-CR904GDZH8 • SPW-CR1154GDZH8
SPW-CR1304GDZH8 • SPW-CR1404GDZH8

Power Range from 22.4 kW to 135 kW

[illegible]

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	th="" tv=""																																																																																																																																																																																																																																					
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period in septuagennial	Asset depreciation period in octogennial	Asset depreciation period in nonagennial	Asset depreciation period in centennial	Asset depreciation period in sesquicentennial	Asset depreciation period in bi-centennial	Asset depreciation period in tri-centennial	Asset depreciation period in quad-centennial	Asset depreciation period in penta-centennial	Asset depreciation period in hexa-centennial	Asset depreciation period in hepta-centennial	Asset depreciation period in octa-centennial	Asset depreciation period in nona-centennial	Asset depreciation period in deca-centennial	Asset depreciation period in undeca-centennial	Asset depreciation period in duodecennial	Asset depreciation period in tredecennial	Asset depreciation period in quattuordecennial	Asset depreciation period in quindecennial	Asset depreciation period in sexdecennial	Asset depreciation period in septuagennial	Asset depreciation period in octogennial	Asset depreciation period in nonagennial	Asset 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hepta-centennial	Asset depreciation period in octa-centennial	Asset depreciation period in nona-centennial	Asset depreciation period in deca-centennial	Asset depreciation period in undeca-centennial	Asset depreciation period in duodecennial	Asset depreciation period in tredecennial	Asset depreciation period in quattuordecennial	Asset depreciation period in quindecennial	Asset depreciation period in sexdecennial	Asset depreciation period in septuagennial	Asset depreciation period in octogennial	Asset depreciation period in nonagennial	Asset depreciation period in centennial	Asset depreciation period in sesquicentennial	Asset depreciation period in bi-centennial	Asset depreciation period in tri-centennial	Asset depreciation period in quad-centennial	Asset depreciation period in penta-centennial	Asset depreciation period in hexa-centennial	Asset depreciation period in hepta-centennial	Asset depreciation period in octa-centennial	Asset depreciation period in nona-centennial	Asset depreciation period in deca-centennial	Asset depreciation period in undeca-centennial	Asset depreciation period in duodecennial	Asset depreciation period in tredecennial	Asset depreciation period in quattuordecennial	Asset depreciation period in quindecennial	Asset depreciation period in sexdecennial	Asset depreciation period in septuagennial	Asset depreciation period in octogennial	Asset depreciation period in nonagennial	Asset depreciation period in centennial	Asset depreciation period in sesquicentennial	Asset depreciation period in bi-centennial	Asset depreciation period in tri-centennial	Asset depreciation period in quad-centennial	Asset depreciation period in penta-centennial	Asset depreciation period in hexa-centennial	Asset depreciation period in hepta-centennial	Asset depreciation period in octa-centennial	Asset depreciation period in nona-centennial	Asset depreciation period in deca-centennial	Asset depreciation period in undeca-centennial	Asset depreciation period in duodecennial	Asset depreciation period in tredecennial	Asset depreciation period in quattuordecennial	Asset depreciation period in quindecennial	Asset depreciation period in sexdecennial	Asset depreciation period in septuagennial	Asset depreciation period in octogennial	Asset depreciation period in nonagennial	Asset depreciation period in centennial	Asset depreciation

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Influenza virus length		Influenza virus width	
Maximum length of segmented surface unit	1	Maximum actual virus length	100 nm
Maximum width of segmented surface unit	40 nm	Maximum actual efficiency rate (actual/maximum)	0.445 nm
Maximum number of segmented surface units	81	Maximum virus length	800 nm
Maximum number of segmented surface units	64-128		

Rating conditions
 Cooling: indoor air temperature 27°C, 24/16/7°C; outdoor air temperature 30°C, 26/17/7°C; wet
 surface temperature at inlet/outlet 27°C, 24/16/7°C; outdoor air velocity 7 m/s, 10/17/7 m/s

Estimation period (days)	Model name	Estimating capacity after post
For single path	<p>pre-E272-0000</p> <p>pre-E2740000</p> <p>pre-E2710000</p>	<p>12.1-18</p> <p>11.1-19</p> <p>10.1-19</p>
For multiple paths	<p>pre-E2710000</p> <p>pre-E2710000</p>	<p>10.1-19</p> <p>11.1-19</p>



Scholarly Value: 4.00

ATK-PLP5000
ATK-PLP16000

Solenoid Valve Controller



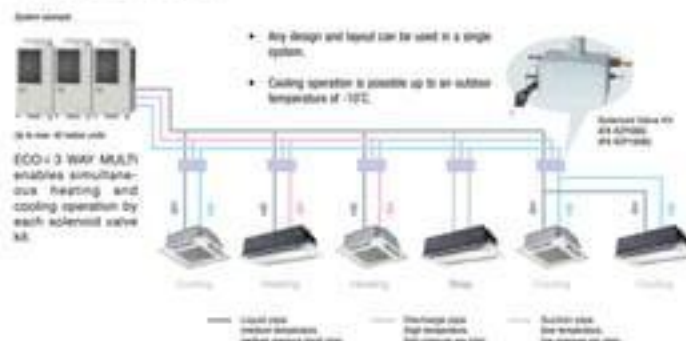
ACC-3WAY-AD

The ECO-1 3 Way Series have five DC inverter outdoor units from 8 HP to 18 HP as basic models and by combination of up to three units, an air-conditioning capacity of 8 HP to 48 HP can be set according to user requirements.

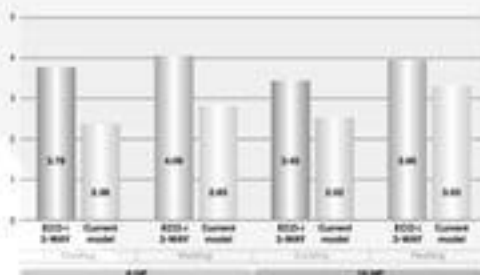
- Simultaneous cooling or heating operation for up to 40 indoor units
- Conform to COP3.34* as the top class in the industry
- Realization of the smallest installation space, top class in the industry
- Retention operation function and back-up operation function provided

*Average cooling and heating loads for 8 different units.

Fully-automatic simultaneous Cooling/Heating operation and heat recovery



Excellent energy saving



The operation efficiency has been improved by using the highly efficient new refrigerant R410A and a DC inverter compressor as well as a new DC fan motor, improvement of the air speed distribution by changing the design of the heat exchanger from 3-direction suction to 4-direction suction and by using a low-loss wire guard for the fan guard.

The advanced technology of ECO-i 3-WAY MULTI



Outdoor units have been unified to a body of the same size and configuration to one size and combination of two types. It allows a neat fit even when several units are installed and space saving in the top area of the building has been realized.

Improved operation efficiency
In addition to the development of a new DC fan motor with high output and high efficiency, the output loss has been reduced by reducing the resistance of the fan guard. It contributes widely to COP increasing.

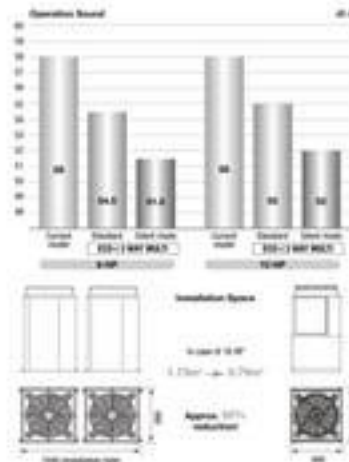
The constant-speed compressor adopts a high-performance lower high-pressure scroll. In comparison with the conventional low-pressure scroll, the oil behavior is stabilized, COP is improved and the reliability is also improved.

Improvement of the heat exchanger
Heatpipes with a diameter of 7 mm are used for the heat exchanger and the radiation area has been increased. In addition, the air speed distribution has been improved by 4-direction suction and the COP has also been improved.

Review of the layout of the structural parts
Noise reduction has been realized by arranging the compressor in a special machine room at the bottom.

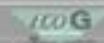
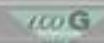
Circle wide top-side installation is possible
The mounting fitting for the outdoor unit have been changed to front and back, so that the unit can be installed side by side with just 100 mm between units and reduction of the installation space has been realized.

Smallest installation space in the industry! Further reduction of the operating sound



The two DC inverter types have 8 HP to 10 HP have been unified to the same outer dimensions by using a two-room construction with the compressor and other structural parts at the lower room of the outdoor unit and the heat exchanger of the upper room of the outdoor unit. In this way, the smallest installation space in the industry and low operating sound have been realized.

Variable Refrigerant Flow Gas Heat Pump 2 way



Gas Heat Pump 3 way

SGP-E70K1GU2 • SGP-E90K1GU2 • SGP-E120K1GU2W
SGP-E150K1GU2W • SGP-E190K1GU2W • SGP-E240K1GU2W

Power Range from 22.4 kW to 71 kW



SGP-E_GU2 SGP-E_GU2W

The Sanyo GHP uses HFC-type refrigerant and clean-burning natural gas for high-efficiency operation. Since it is designed to work with existing piping, the Sanyo GHP offers an easy way to machine that is economical to run and maintain.

- Prevent global warming (Lowest CO2 emission standard)
- Up to 40% reduction of nitrogen oxide (NOx) emission
- Reduced gas consumption
- Reduced electric power consumption
- Outstanding durability for greater economical efficiency
- Outdoor unit has reduced noise and vibration

Model name	Capacity	SGP-E70K1GU2		SGP-E90K1GU2		SGP-E120K1GU2W		SGP-E150K1GU2W		SGP-E190K1GU2W		SGP-E240K1GU2W	
		Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling
Heating	275	275	275	315	315	405	405	505	505	605	605	705	705
Cooling	275	275	275	315	315	405	405	505	505	605	605	705	705
Gas consumption	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Electrical	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Settings	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Gas consumption	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
SGP	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Size	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Water Connect	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Gas	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Number of connected indoor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

*1. All data is only for reference. Actual value will be different according to the actual condition.

Specifications subject to change without notice.

Rating conditions
Heating indoor air temperature 20°C (68°F) DB, Outdoor air temperature 7°C (45°F) DB
Cooling indoor air temperature 27°C (81°F) DB, Outdoor air temperature 35°C (95°F) DB

Specification and GHP size	Model name	Rating capacity after gas
For indoor unit	SGP-E70K1GU2	22.4 kW
	SGP-E90K1GU2	22.4 kW - 30.0 kW
	SGP-E120K1GU2W	30.0 kW - 35.0 kW
For outdoor unit	SGP-E150K1GU2W	35.0 kW - 40.0 kW
	SGP-E190K1GU2W	40.0 kW - 50.0 kW
	SGP-E240K1GU2W	50.0 kW - 71.0 kW

B-110A

Scientific Valve Kit



ATK-RZP56G
ATK-RZP160G

Scientific Valve Controller



ACC-3WAY-AG

Power Range 56.0 kW



SGP-EZ190K1GU2

Sanyo 3-Way GHP is ideal for the following applications:

- Office buildings with different room temperatures due to the different amount of sunshine received
- Up to 28 indoor units connectable to one outdoor unit
- Buildings with computer/business equipment rooms requiring year-round cooling

Specification, prime, type		Model name
Type		SGP-EZ190K1GU2
Capacity range of indoor unit in standard and standardized indoor units		19.0~207.0kW
Maximum number of 4-way connected indoor units		7 (1~6, 10~15, 20~25)
Maximum cooling capacity		207.0kW
Maximum heating capacity		207.0kW
Maximum number of 4-way connected indoor units in 10~15kW		10
Maximum number of 4-way connected indoor units in 20~25kW		25
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Maximum number of 4-way connected indoor units in 20~25kW		25
Maximum number of 4-way connected indoor units in 20~25kW		25
Maximum number		

SPW-XDR74GXH56 • SPW-XDR94GXH56 • SPW-XDR124GXH56
SPW-XDR164GXH56 • SPW-XDR184GXH56 • SPW-XDR254GXH56
SPW-XDR364GXH56 • SPW-XDR454GXH56 • SPW-XDR604GXH56

Power Range from 2.2 kW to 16.0 kW

Model No.	Indoor Unit	SPW-XDR74GXH56		SPW-XDR94GXH56		SPW-XDR124GXH56		SPW-XDR164GXH56		SPW-XDR184GXH56		SPW-XDR254GXH56		SPW-XDR364GXH56		SPW-XDR454GXH56		SPW-XDR604GXH56	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	2.2	3.0	2.9	3.5	3.5	4.5	4.5	5.5	5.5	6.5	6.5	8.0	8.0	10.0	10.0	12.0	12.0	16.0
Refrigerant	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Electrical Rating																			
Power Supply	V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V
Energy Rating	1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Running current	A	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Power loss	W	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Features																			
Room control box	W	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Refrigerant control box	W	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Net Wt. (incl. control box)	kg	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Dimensions & Weight																			
Room Unit (WxDxH)	mm	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250
Net weight (incl. box)	kg	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Room WxDxH	mm	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250
Room weight	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Specifications subject to change without notice

Model No.	Indoor Unit	SPW-XDR74GXH56		SPW-XDR94GXH56		SPW-XDR124GXH56		SPW-XDR164GXH56		SPW-XDR184GXH56		SPW-XDR254GXH56		SPW-XDR364GXH56		SPW-XDR454GXH56		SPW-XDR604GXH56	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kW	2.2	3.0	2.9	3.5	3.5	4.5	4.5	5.5	5.5	6.5	6.5	8.0	8.0	10.0	10.0	12.0	12.0	16.0
Refrigerant	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Electrical Rating																			
Power Supply	V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V	1 phase/220V
Energy Rating	1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Running current	A	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Power loss	W	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Features																			
Room control box	W	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Refrigerant control box	W	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Net Wt. (incl. control box)	kg	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Dimensions & Weight																			
Room Unit (WxDxH)	mm	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250
Net weight (incl. box)	kg	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Room WxDxH	mm	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250	250 x 250 x 250
Room weight	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Specifications subject to change without notice

Rating conditions

Cooling indoor air temperature 27°C (80°F) RH 50%, Outdoor air temperature 35°C (95°F) RH 50%

Heating indoor air temperature 20°C (68°F) RH 30%, Outdoor air temperature 7°C (45°F) RH 75%



Wired with line



Wireless



Smartphone



RC 250000 (Standard remote unit) RC 450000

Option remote controller

Panel



SPW-XDR...GXH56(B)

Air intake chamber



CMB-FS140AQ + CMB-GS140AQ (optional)

- Brocco fans and heat exchanger fins with new shapes are adopted and the operating sound could be reduced by max 5 dB (A).
- Wide reduction of the power consumption by adoption of newly developed DC fan motors with variable speed, new heat exchangers.
- Easy fine adjustment of the body suspension height.
- Discharge opening and flap with new shape.
- Light, thin and attractive design with easy installation.
- A drain height of approximately 85 cm from the ceiling surface.
- Easy servicing of the drain pan.

Variable Refrigerant Flow

Semi Concealed 4-way air discharge

SPW-XMR74EXH56 • SPW-XMR94EXH56 • SPW-XMR124EXH56
SPW-XMR164EXH56 • SPW-XMR184EXH56

Power Range from 2.2 kW to 5.6 kW



Option remote controller

Panel



SPW-XMR...EXH56(B)

- New dimensions 80 x 80 cm suitable for European undercasing standards
- Three-speed centrifugal fan
- Anti-mould and anti-bacteria washable filters
- Low operating sound
- Night set back capability

Indoor units

Semi Concealed 2-way air discharge

SPW-SR74GXH56 • SPW-SR94GXH56 • SPW-SR124GXH56
SPW-SR164GXH56 • SPW-SR184GXH56 • SPW-SR254GXH56

Power Range from 2.2 kW to 7.3 kW



Option remote controller

Panel



SPW-SR...GXH56(B)

- Realization of thin, compact and light units
- Silent design
- Realization of must suitable air flow for heating and cooling
- Excellent installation performance
- Adoption of a power up-down pump
- Simple maintenance

Model No.	Indoor unit	SPW-XMR74EXH56		SPW-XMR94EXH56		SPW-XMR124EXH56		SPW-XMR164EXH56		SPW-XMR184EXH56	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kg/h	2.2	2.2	2.8	2.8	3.6	3.6	4.5	4.5	5.6	5.6
Refrigerant	kg	0.25	0.25	0.32	0.32	0.40	0.40	0.50	0.50	0.63	0.63
Electrical Rating											
Power (Wattage)		1,000W (1.0)	1,000W (1.0)	1,200W (1.2)	1,200W (1.2)	1,500W (1.5)	1,500W (1.5)	1,800W (1.8)	1,800W (1.8)	2,200W (2.2)	2,200W (2.2)
Energy rating (kW)		0.4	0.4	0.5	0.5	0.6	0.6	0.8	0.8	1.0	1.0
Running current (A)		4	4	5	5	6	6	8	8	10	10
Power input (W)		50	50	60	60	75	75	100	100	125	125
Features											
Power source type	Auto (V)	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V
Power control type	Auto (V)	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V
Power connection type	Auto (V)	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V
Dimensions & Weight											
Indoor unit (mm)	mm	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100
Net weight (kg)	kg	2.2	2.2	2.8	2.8	3.6	3.6	4.5	4.5	5.6	5.6
Gross weight (kg)	kg	2.5	2.5	3.2	3.2	4.0	4.0	5.0	5.0	6.3	6.3
Panel weight (kg)	kg	0.5	0.5	0.6	0.6	0.8	0.8	1.0	1.0	1.2	1.2

Operating conditions

Cooling: Indoor air temperature 17°C (DB/17°C WB), Outdoor air temperature 35°C (DB/24°C WB)
Heating: Indoor air temperature 20°C (DB), Outdoor air temperature 7°C (DB/-12°C WB)

Model No.	Indoor unit	SPW-SR74GXH56		SPW-SR94GXH56		SPW-SR124GXH56		SPW-SR164GXH56		SPW-SR184GXH56		SPW-SR254GXH56	
		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	kg/h	2.2	2.2	2.8	2.8	3.6	3.6	4.5	4.5	5.6	5.6	7.3	7.3
Refrigerant	kg	0.25	0.25	0.32	0.32	0.40	0.40	0.50	0.50	0.63	0.63	0.80	0.80
Electrical Rating													
Power (Wattage)		1,000W (1.0)	1,000W (1.0)	1,200W (1.2)	1,200W (1.2)	1,500W (1.5)	1,500W (1.5)	1,800W (1.8)	1,800W (1.8)	2,200W (2.2)	2,200W (2.2)	2,800W (2.8)	2,800W (2.8)
Energy rating (kW)		0.4	0.4	0.5	0.5	0.6	0.6	0.8	0.8	1.0	1.0	1.2	1.2
Running current (A)		4	4	5	5	6	6	8	8	10	10	12	12
Power input (W)		50	50	60	60	75	75	100	100	125	125	160	160
Features													
Power source type	Auto (V)	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V
Power control type	Auto (V)	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V
Power connection type	Auto (V)	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V	220-240V
Dimensions & Weight													
Indoor unit (mm)	mm	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100	80 x 80 x 100
Net weight (kg)	kg	2.2	2.2	2.8	2.8	3.6	3.6	4.5	4.5	5.6	5.6	7.3	7.3
Gross weight (kg)	kg	2.5	2.5	3.2	3.2	4.0	4.0	5.0	5.0	6.3	6.3	8.0	8.0
Panel weight (kg)	kg	0.5	0.5	0.6	0.6	0.8	0.8	1.0	1.0	1.2	1.2	1.5	1.5

Operating conditions

Cooling: Indoor air temperature 17°C (DB/17°C WB), Outdoor air temperature 35°C (DB/24°C WB)
Heating: Indoor air temperature 20°C (DB), Outdoor air temperature 7°C (DB/-12°C WB)

Variable Refrigerant Flow

Semi Concealed 1-way air discharge

SPW-ADR74GXH56 • SPW-ADR94GXH56 • SPW-ADR124GXH56

Power Range from 2.2 kW to 3.5 kW



Option remote controller

Panel



PWR-AD124GXH56



SPW-ADR...GXH56(B)

- New development concept: low Sound, Light Weight and Compact
- Ideal for hotel and hospital applications
- Drain pump features 800mm height
- Ultra-light design: only 11kg for class 9 and class 12
- Automatic flap movement ensures optimum air distribution and ceiling protection
- Long life filter included
- Three-speed centrifugal fan by wired or wireless remote controller

Indoor units

Semi Concealed Slim 1-way air discharge

SPW-LDR94GXH56 • SPW-LDR124GXH56
SPW-LDR164GXH56 • SPW-LDR184GXH56
SPW-LDR254GXH56

Power Range from 2.2 kW to 7.3 kW



Option remote controller

Panel



PWR-LD254GXH56



SPW-LDR...GXH56(B)

- Industry high capacity to handle ceiling heights up to 4.2m
- Lightweight, compact and quiet
- 3 types of air-blow (down, down-front, front only)
- Smudge-free operation
- The hanging height of the unit can be easily adjusted
- Automatic flap movement ensures optimum air distribution
- Drain pump features 800 mm height
- Three-speed centrifugal fan by wired or wireless remote controller

Model No.	Power (kW)	SPW-ADR74GXH56		SPW-ADR94GXH56		SPW-ADR124GXH56	
		Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	40	2.20	2.20	2.20	2.20	2.20	2.20
Performance	High air flow						
Technical Rating							
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Energy (kWh)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)		1.20 (1.20-1.40)		1.20 (1.20-1.40)		1.20 (1.20-1.40)	
Power (kW)							

SPW-UR74GXH56 • SPW-UR94GXH56 • SPW-UR124GXH56
SPW-UR164GXH56 • SPW-UR184GXH56 • SPW-UR254GXH56
SPW-UR364GXH56 • SPW-UR484GXH56

Power Range from 2.2 kW to 14.0 kW

[illegible]

See <http://www.elsevier.com/locate/ymbs> for more information on this journal

[illegible]

Non-binding request for change without cost

Keywords: child sexual abuse; disclosure; self-blame

Coating Index at temperature 20°C (68°F) min. Coating at temperature 20°C (68°F) min.
 Heating Index at temperature 20°C (68°F) min. Heating at temperature 20°C (68°F) min.



Option remote controller



SPW-LA_GXH56(B)

- Realized comfortable ambient by dispersed arrangement of discharge ports
- The static pressure outside the unit can be increased using a booster cable
- Discharge duct adapter flange included (2 a 200 for size 74-184, 3 a 200 for size 254, 4 a 200 for size 364, 584)
- Drain pump with increased power
- Easy maintenance by outer insulation of electric equipment box
- Unified body height of approximately 37 cm for all models

Indoor units
Concealed duct

SPW-UMR74EXH56 • SPW-UMR94EXH56 • SPW-UMR124EXH56
SPW-UMR164EXH56 • SPW-UMR184EXH56 • SPW-UMR224EXH56

Power Range from 2.2 kW to 6.4 kW



SPW.FUR_EXH56B

- Integrated pump for condensate discharge
- Fresh air intake
- Reduced dimensions
- Anti-mould and anti-bacteria washable filters
- Three-speed centrifugal fan by remote control and feature to increase speed/pressure, using the booster ratio
- Night set back capability

[illegible]

Rating conditions

RESULTS

SPW-KR74GXH56 • SPW-KR94GXH56 • SPW-KR124GXH56
SPW-KR164GXH56 • SPW-KR184GXH56 • SPW-KR254GXH56

Power Range from 2.2 kW to 7.3 kW



Option remote controller



SPW-KFL_GXH56(B)

- Closed air discharge ports, when operation is stopped the flap closes completely to prevent the entry of dust and to keep the unit clean
- Lighter and small units make the installation easy
- Silent design
- Smart colour and round-shape design with horizontal stripes
- Piping outlet in three directions
- Anti-mould filters are standard equipment
- Washable front panel
- Optional external electronic expansion valve kit AZK-SUPK-S02GB prevents noise in toilet rooms and bed rooms

[illegible]

See <http://www.elsevier.com/locate/ymbs>

Rating conditions
 Cooling: inlet air temperature 17°C DB/15°C WB, outdoor air temperature 30°C DB/17°C WB
 Heating: inlet air temperature 30°C DB, outdoor air temperature 7°C DB/11°C WB

SPW-FTR74EXH56 • SPW-FTR94EXH56 • SPW-FTR124EXH56
SPW-FTR164EXH56 • SPW-FTR184EXH56 • SPW-FTR224EXH56

Power Range from 2.2 kW to 6.1 kW



Option remote controller

SPW-FTRL-EG-56(B)

- Three-speed centrifugal fan
- Anti-mould and anti-bacteria washable filters
- Low operating sound
- Night set back available
- Infrared remote control with 24h digital timer and full features control and horizontal flap swinging or set on a fixed position

[illegible]

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Rating conditions
 Cooling: inlet air temperature 17°C (59°F) 90% humidity air temperature 30°C (86°F) 50% RH
 Heating: inlet air temperature 30°C (86°F) 50% RH inlet air temperature 17°C (63°F) 90% RH

Indoor units
Floor standing

SPW-FR74GXH56 • SPW-FR94GXH56 • SPW-FR124GXH56
SPW-FR164GXH56 • SPW-FR184GXH56 • SPW-FR254GXH56

Power Range from 2.2 kW to 7.1 kW



Visual with lower
Alert

WCS, Thomson

Windows
WCS, Amnol, W. B.

Simplified
WCS, Amnol



Option remote controller

SPW-FR...GXH56(B)

- Realization of perimeter air conditioning with high interior quality
- Effective perimeter handling is possible with simple work execution
- Large window space can be taken
- Easy installation
- The wired remote controller can be easily installed at the body

[illegible]

Rating conditions
Cooling index at temperature 25°C (68°F) WB, jacket at temperature 30°C (86°F) WB
Heating index at temperature 27°C (81°F) WB, jacket at temperature 37°C (99°F) WB

SPW-GU055XH • SPW-GU075XH • SPW-GU105XH

Power Range from 500 m³/h to 1000 m³/h

	JPM 2016-17 GPM scenario			JPM 2016-17 GPM scenario			JPM 2016-17 GPM scenario		
Performance	Coating	Seal	Roofing	Coating	Seal	Roofing	Coating	Seal	Roofing
Revenue (\$)	100	100	100	100	100	100	100	100	100
Costs	48	48	48	48	48	48	48	48	48
Profit	52	52	52	52	52	52	52	52	52
Operating Leverage (Times)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Fin. Leverage (Times)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total Leverage (Times)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Return on Assets	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Equity (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%
Return on Capital Employed (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Invested Capital (incl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&D)	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Return on Assets (excl. R&D, excl. R&D, excl. R&D, excl. R&D, excl. R&									

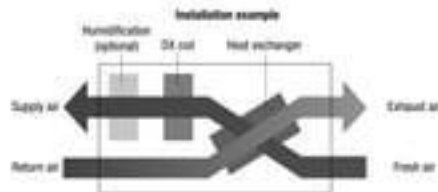
Downloaded by [University of California, San Diego] on 04/01/15. Copyrighted material.

Options	4.75	5.75	6.75	7.75
Implied Volatility (StdDev)	4.75	5.75	6.75	7.75
Implied Beta	0.7	0.8	0.9	1.0

Testing conditions

Cooling factor at temperature 27°C, 28°C, 29°C, Cooling at temperature 30°C, 28°C, 27°C, 26°C

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Option remote controller







SPW-GU 30H

A powerful fresh air incoming to match the right temperature and humidity indoor condition in medium-sized commercial space.





- Integration of heat recovery ventilation and DX coil technology for optimum air temperature control
- The DX coil can be connected to all ECODGR® outdoor units
- High efficiency on both temperature and humidity condition
- Compact and quiet design
- High static pressure available
- Standard heights ensure simple installation to ductwork
- Easy-to-clean filter prevents mould or bacteria from accumulating
- Connectable to current ECODGR® control systems
- Easy maintenance and service by cut installation of the electric box
- Humidifier function available as option

Sanyo control equipment meets the needs of variety of customers

Operation system	Individual control system			Timer operation
Basic	Normal operation	Operation from each unit	Quick and easy operation	Daily and weekly program
External appearance				
Typ. model name	Timer wired remote control RCS-700000	Wireless remote control RCS-700000-MU (J) RCS-700000-MU (J) RCS-700000-MU (J) RCS-700000-MU (J) RCS-700000-MU (J)	Simplified remote control RCS-400000	Schedule timer SMA-700000
N. of air units which can be controlled	1 group, 8 units	1 group, 8 units	1 group, 8 units	64 groups, max. 64 units
Limitation of use	• Up to 2 units can be connected per group	• Up to 2 units can be connected per group	• Up to 2 units can be connected per group	• Power supply from the system controller • In case of the system controller possibility of connection to the T10 terminal of an indoor unit
Connectable indoor unit	4 series indoor unit	4 series indoor unit	4 series indoor unit	2 series indoor unit 4 series indoor unit

Functions	ON/OFF	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	---
	Mode setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	---
	Fan speed setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	---
	Temperature setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	---
	Air flow direction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	---
	Removal/return switching	---	---	---	---
	Weekly program	<input type="radio"/>	---	---	<input type="radio"/>

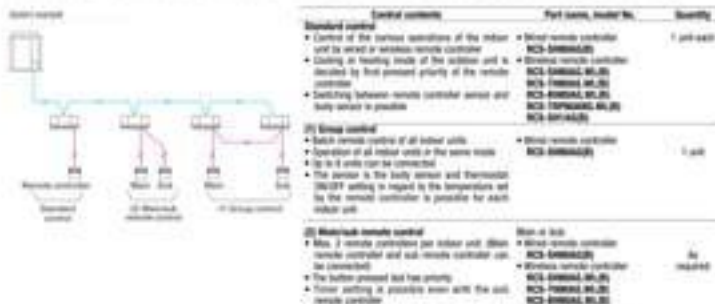
---: Cannot be performed. "Up grade": To be performed. "Communication": Not "New type".

Operation system	Centralized control system			
Basic	Operation with different functions from center station	Daily ON/OFF operation from center station	Simplified charge ratio for each board	
			Touch screen panel	Personal computer (PC) board
External appearance				
Typ. model name	System controller SMA-400000	ON/OFF controller SMA-400000	Intelligent controller SMA-400000	Communication adapter SMA-400000
N. of air units which can be controlled	64 groups, max. 64 units	16 groups, max. 64 units	64 units x 4 systems, max. 256 units	2 systems, max. 128 units
Use limitation	• Up to 16 units can be connected to one system • Main unit and 11 slave unit = 1 set unit connection is possible • Use without remote controller is possible	• Up to 8 units (4 main units + 4 sub units) can be connected to one system • Use without remote controller is impossible	• A communication adapter (SMA-400000) must be installed for three or more systems	
Connectable indoor unit	2 series indoor unit 4 series indoor unit	2 series indoor unit 4 series indoor unit	2 series indoor unit 4 series indoor unit	2 series indoor unit 4 series indoor unit

Functions	ON/OFF	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Mode setting	<input type="radio"/>	---	<input type="radio"/>	<input type="radio"/>
	Fan speed setting	<input type="radio"/>	---	<input type="radio"/>	<input type="radio"/>
	Temperature setting	<input type="radio"/>	---	<input type="radio"/>	<input type="radio"/>
	Air flow direction	<input type="radio"/>	---	<input type="radio"/>	<input type="radio"/>
	Removal/return switching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Weekly program	---	---	<input type="radio"/>	<input type="radio"/>

---: Cannot be performed. "Up grade": To be performed. "Communication": Not "New type".

Remote controller (Wired remote controller/Wireless remote controller)



Timer remote controller RCS-TM00BG

New



- Basic remote controller ON/OFF**
- Operation mode changeover (Cooling, Heating, Dry, Auto, Fan)
- Temperature setting (Cooling/Dry: 16-30 deg heating: 16-30 deg)
- Air volume adjustment (W: H/L, Auto)
- Air flow direction adjustment
- Time Function**
- 24-hour real time clock
- Day of the week indicator
- Memory Program Function**
- A maximum of 8 actions can be programmed per day
- Display Function**
- This function can prevent the room temperature from dropping or rising when the occupants are out for a long time
- Display Function**
- This function controls the room temperature for comfortable sleeping
- Max. 2 indoor units can be controlled from one remote controller**
- Remote control by main remote controller and sub-remote controller is possible**
- Max. 2 remote controllers (main remote controller and sub-remote controller) can be installed for one indoor unit

Wireless remote controller



- Verification independent operation is possible**
- When commercial ventilation fans or heat exchanger ventilation fans have been installed, they can be operated with this remote control (interlocked operation with the indoor unit or independent ventilation ON/OFF)
- Easy installation for the 3-way convertible type simply by replacing the cover part**
- Timer setting is up to 72 hours (in every 30 minutes)
- Remotely control by main remote controller and sub-remote controller is possible**
- Max. 2 remote controllers (main remote controller and sub-remote controller) can be installed for one indoor unit
- Up to 4 indoor units can be controlled by 2 indoor units and 4 Group, indoor and outdoor**
- When RCS-08000AG(B) is used, wireless control becomes possible for all indoor units**
- When a remote monitor is set up to a different room, control from that room also becomes possible
- Automatic operation by means of the emergency operation button is possible even when the remote controller has been lost or the batteries have been exhausted
- In addition, there are other functions like temperature setting, operation switching, wind direction/fan speed setting, and so on**

Simplified remote controller RCS-KR1AG(B)



- A remote controller with simple functions and basic operation**
- Suitable for open rooms or hotels where detailed functions are not required
- ON/OFF, operation mode switching, temperature setting, wind speed switching, wind direction setting, sleep display and remote control will display can be performed
- Switch group control for up to 8 indoor units
- Remote control by main remote controller and sub-remote controller is possible with a simplified remote controller or a wired remote controller (up to two units)

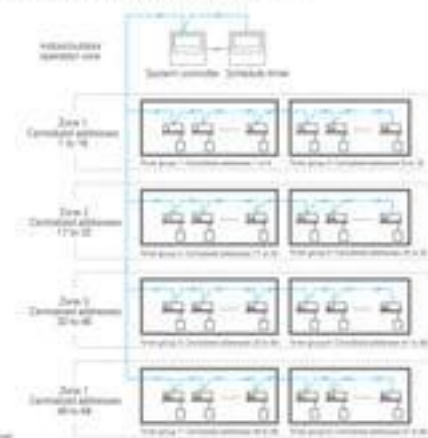
Schedule timer SHA-TM04AG(B)



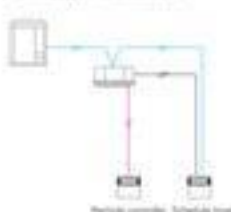
* In operation mode and temperature settings are not possible with the schedule timer 2 (outlet unit) together with a remote controller, a remote controller or independent controller (also being set possible with a 3.5mm pin base an indoor setting function, the control function of a system controller and/or an outdoor unit for outdoor setting and so on)

- Up to 64 groups (max. 64 indoor units) can be controlled divided into 8 time groups**
- Its program operations (Operation/Stop/Local permission/Local prohibition) per day can be set in a program for one week**
- This operation or stops, remote controller local permission or remote controller local prohibition and their respective combinations are possible (Operation + local permission, stop + local prohibition, only local permission, etc.)
- Local prohibition and the combination of the three forms of temperature setting, mode change and speedswitching can be set at the time of installation
- A function for pausing the timer in case of national holidays has been added and timer operation also can be stopped for a long time**
- By setting holidays or operation stop within one week, the timer can be paused only during that week
- All timer settings can be stopped with the timer "ON/OFF" (pause) button return to timer operation is made by pressing the button again

Connection example 2 (power supply from the control controller)



Connection example 1 (power supply from the indoor unit)



System controller SHA-KC64AG(B)



Dimensions in mm
150 (W) x 120 (H) x 25 (D) (mounting bracket)

- * Power supply AC 100 to 240V
- * VCCF Remote reset effective voltage: AC 100 to 240V 50/60Hz
- * Remote reset voltage line contacts at 24V AC (R) internal power supply within AC 100 to 240V
- * Total wiring length 1 km

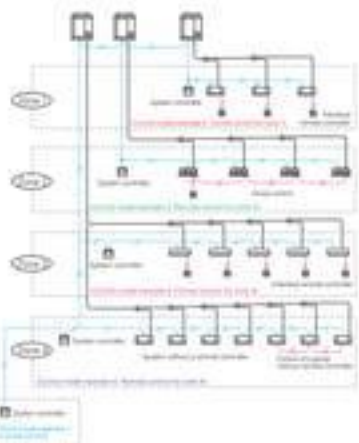
- Individual control is possible for max. 64 groups, 64 indoor units
- Control of 64 indoor units divided into 8 zones, each zone can have up to 16 groups and each group can have up to 8 units
- Control is possible for (ON/OFF) operation mode, fan speed, air flow direction only when used without a remote controller, operation monitoring, alarm monitoring, ventilation, remote controller local operation prohibition and so on.

Individual	All operations are possible also from the remote controller. However, the contents will be changed to suit operation but the contents of the controller.
Prohibition 1	The remote controller cannot be used for (ON/OFF) and other operations are possible from the remote controller.
Prohibition 2	The remote controller cannot be used for (ON/OFF) mode change and temperature setting and other operations are possible from the remote controller.
Prohibition 3	The remote controller cannot be used for mode change or temperature setting change and other operations are possible from the remote controller.
Prohibition 4	The remote controller cannot be used for operation mode change and other operations are possible from the remote controller.

- Just use with a remote controller as intelligent controller, a schedule timer and as an in possible (The maximum number of permissible system controllers is 10, including other central controllers on the same circuit).
- In case of just use with a wireless remote controller, there are limitations for the control mode. Please see only with "Individual" and "Control 1".

- Control of systems without a remote controller and of multi-task systems (a total of up to two units) is possible.

Connection example



System mode	Control control mode	Remote control mode
All mode	All control system (Group 1)	All remote control
Zone 1 mode	Zone 1 control system (Group 1)	Zone 1 remote control
Zone 2 mode	Zone 2 control system (Group 2)	Zone 2 remote control
Zone 3 mode	Zone 3 control system (Group 3)	Zone 3 remote control
Zone 4 mode	Zone 4 control system (Group 4)	Zone 4 remote control

Touch panel



Dimensions in mm
200 (W) x 100 (H) x 10 (D)

- * Power supply AC 100 to 240V (50/60Hz), 20 W
- * Remote reset voltage AC 100 to 240V 50/60Hz
- * Remote reset voltage line contacts at 24V AC (R) internal power supply within AC 100 to 240V
- * Total wiring length 1 km for each system
- * Only for connecting to the panel

Limitation contents for prohibited operation

Prohibition means limitation of the operation contents from the remote controller. It is also possible to change the prohibition items.

Individual	There is no limitation to the operation of the remote controller. However, the contents will be changed with operation but to the contents of the controller. (e.g. group reset priority)
Prohibition 1	The remote controller cannot be used for (ON/OFF) and other operations are possible from the remote controller.
Prohibition 2	The remote controller cannot be used for (ON/OFF) operation mode change and temperature setting and other operations are possible from the remote controller.
Prohibition 3	The remote controller cannot be used for operation mode change and temperature setting and other operations are possible from the remote controller.
Prohibition 4	The remote controller cannot be used for operation mode change and other operations are possible from the remote controller.

Note: Actual part unit of the RFF system and the intelligent controller in the same communication operation line.



Dimensions in mm
200 (W) x 100 (H) x 10 (D)

- * Power supply AC 100 to 240V (50/60Hz), 10 W
- * Remote reset voltage AC 100 to 240V 50/60Hz

Intelligent controller SHA-KT256AG(B)

- Max. 256 indoor units (4 systems x 64 units) can be controlled. In case of three or more systems, a communication adaptor (SHA-KA128AG) must be included on the outdoor.

- Operation is possible as batch, in zone units, in lowest units and in group units.

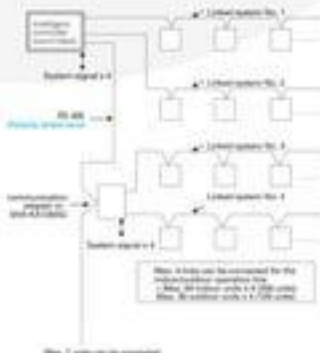
- (ON/OFF) operation mode setting, temperature setting, fan speed setting, air flow direction setting (when used without a remote controller) and remote controller local operation prohibition (prohibition 1, 2, 3, 4) can be done.

- A system without a remote controller is possible, just use with a remote controller or a system controller and so on also is possible.

- Use of a schedule timer and holiday setting also can be done.

- Proportional distribution of the air-conditioning energy is possible.

- In case of just use with a wireless remote control panel, there are limitations for the control mode. Please see only with "Individual" and "Control 1".



Communication adaptor RCS-KA128AG(B)

- Required to connect three or more linked wiring systems (indoor/outdoor operation lines) to the intelligent controller.

- Also required for connection of the RFF software.

* See user manual, please refer to page 14 of page 14.

- Two linked wiring systems can be connected by one SHA-KA128AG but max. 4 systems can be connected for the entire intelligent controllers.

* In the case of all-wired control system, it must be installed indoors or in the control room only.



Dimension in mm
(W x H x D) 160 x 120 x 40 (excluding terminal)

* Power supply
* 12 volt

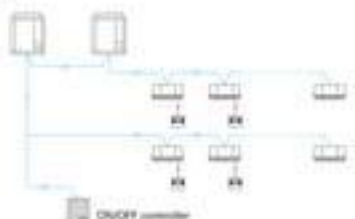
AC 220V/115V
Terminal block for indoor
unit DC 24V, 4-16V/24V OFF
Terminal block for outdoor
unit DC 24V, 4-16V/24V OFF
DC 24V/115V

ON/OFF controller SHA-KC16KAG(B)

- 16 groups of indoor units can be controlled
- Collective control and individual group (unit) control can also be performed
- Up to 8 ON/OFF controllers (4 lines, 4 sets) can be installed in one link system
- The operation status can be determined immediately

* An operation mode and temperature settings are not possible with the ON/OFF controller. It must be used together with a remote controller in system controller.

System example



Remote sensor ART-K45AG(B)

- This is a remote sensor which can be used with 4 series indoor unit. Please use it to detect the room temperature when a remote controller sensor or body sensor is used (correspondence to a system without a remote controller is possible)
- For joint use with a remote control switch, use the remote control switch as main remote controller



Signal output board ACC-SG-AG(B)

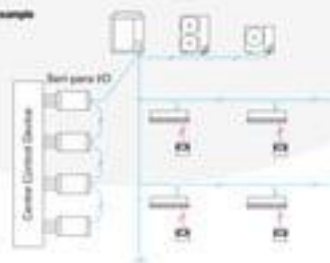
- Defrost, heating, cooling and thermostat (ON) signal can be put out to the outside
- Signal type (2 types) Voltage specification, low voltage specification



Seri-Para I/O Unit for 16 groups indoor unit ACC-SP16TAG(B)

- This unit can control up to 16 outdoor units
- From the center control device, mode changing and batch operation/ batch stop are possible
- This unit can control and monitor the status up to 16 groups of indoor units (plus 64 indoor units)
- Up to 4 seri-para units can be connected in one system
- From the center control device, it is possible to set the temperature and to monitor the room temperature or intake air temperature

System example



Input

1. ON/OFF Pulse DC 24V
2. Load position Continuous DC 24V
3. Temp. setting Analog DC 1-5V
4. AC/DC OFF Pulse DC 24V
5. Air flow position & Emergency stop Continuous DC 24V

Output

1. Indoor/Outdoor fan fan stop
2. Room temp. Analog DC 1-5V
3. AC/DC OFF

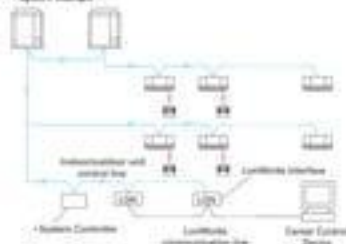


Lon Works Interface SHA-LN16UG(B)

- This interface is a communications converter for connecting LonWorks to the Sanyo air conditioner unit (PAC - GPF) control network
- From the host connected to LonWorks, basic settings and status monitoring is possible for up to 16 groups of A/C units

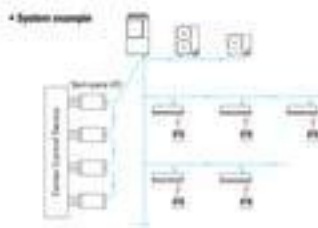
Functions		
A/C unit settings for the LonWorks communication	Settings for each group of indoor units	<ul style="list-style-type: none"> Defrost Temp. setting Operation mode Defrost 1 setting Defrost 2 setting Emergency stop
A/C unit status notifications made to the LonWorks communication	Setting for all units	<ul style="list-style-type: none"> Room stop Temp. setting Operation mode Defrost 1 setting Defrost 2 setting Room status Indoor units with active status Alarm temp. A/C unit status Temperature sensor setting Minimum limit setting By Transmittance
Configuration properties		<ul style="list-style-type: none"> Serial use of the following remote controller protocol, air-conditioning, air direction setting, etc. are not

System example





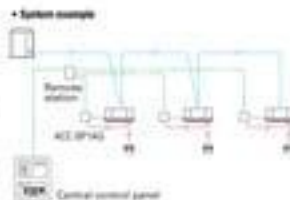
Seri-Para I/O unit for outdoor unit
ACC-XSP4U1G(8)



- | | |
|--|---|
| | <pre> // Print length cout << "Length: " << str.length() << endl; // Insert str.insert(10, "Hello"); // Erase str.erase(10); // String length cout << "Length: " << str.length() << endl; </pre> |
|--|---|

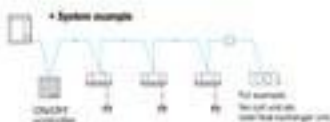


Seri-Para I/O unit for each indoor unit
ACC-SP1AG(B)

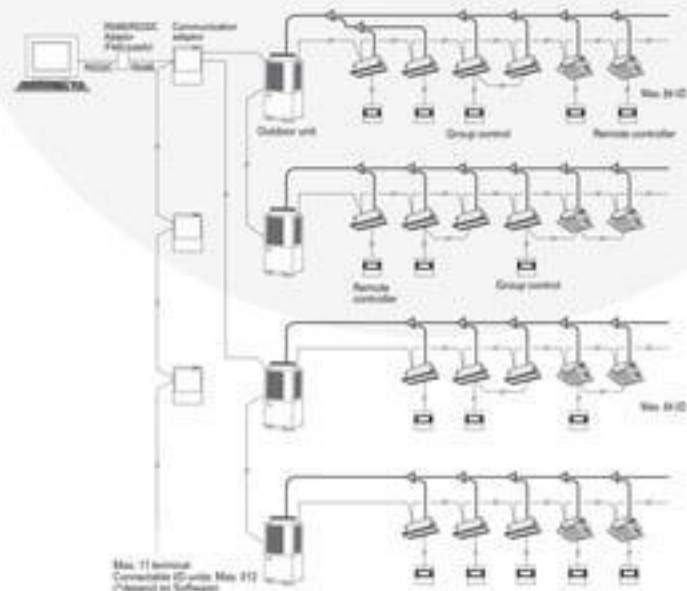


- Control and status monitoring is possible for individual indoor units (7 groups)
- In addition to operation and stop, there is a digital input function for air speed, air direction, operation mode and demand
- Temperature setting and measurement of the indoor unit's temperature can be performed from central monitoring
- The analog input for temperature setting is 0 to 10 V
- Power is supplied from the 710 terminal of the indoor unit. Separate power supply also is possible (in case of outdoor temperature measurement)

Interface adaptor SHA-KL4UG(B)



- * This software (BSP) is an air conditioner control system for buildings. By using the adapter X2, Any adapter and the host, add up to 16 systems can be connected for a maximum of 512 indoor units.



Software environment

- | | |
|----------------|---|
| OS | Windows 2000
Windows NT 4.0 Service Pack 4
or above |
| Browser | Internet Explorer 4.0
or above |



Keywords: *work, stress, coping, organizational commitment, organizational citizenship behavior*

All our settings

- Low speed
- Mode change
- Room temperature setting
- Fan speed setting
- Filter setting
- Control panel setting
- Filter-roy Check
- Auto reset

AIR will replace

- On/Off status
- Operation mode
- Setting temperature
- Fan speed status
- Fan status
- Control panel setting
- Filter type status
- (Type 2) Filter status
- Alarm code
- Check for updates

^aWhat the final college is associated with communication subjects, the getting of subject matter and communication associated to be correct.



SANYO

SANYO Hydronic products
a year-round comfort air-conditioning in any
residential and commercial building

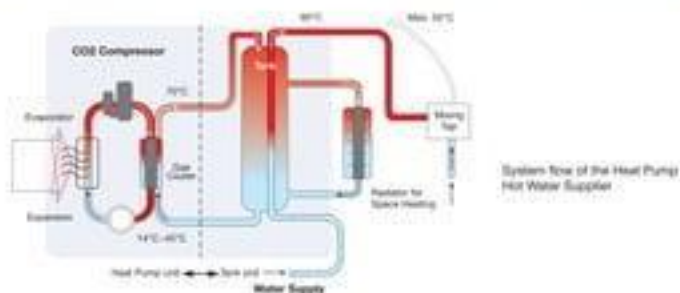
In the small and medium capacity range Sanyo offers a very large range of hydronic products to satisfy any Customer's demand and expectations. With CO₂ ECo Sanyo reviewed the physicality of CO₂ natural refrigerant and verified its good performance in cold climates and its advantage in application to water heaters for the refrigeration cycle. Air-to-water chillers and heat pumps with built-in hydronic system make installation quick and easy and reduce installation space. The elegant and compact design of the water terminal and fan-coil units ensure high performances and low noise level certified by Eurovent.

INDEX OF PRODUCTS:

- | | |
|--|----------|
| • CO ₂ heat pump hot water supplier | pag. 122 |
| • Water chillers 6-17 kW | pag. 126 |
| • Water chillers 20-40 kW | pag. 127 |
| • Water chillers 40-80 kW | pag. 128 |
| • Water chillers 80-160 kW | pag. 129 |
| • Water terminal units | pag. 130 |
| • Fan-coil units | pag. 131 |

SHP-C450EN • SHP-TH22DON • SHP-TH22DHN

Sanyo CO2 ECO is a system that effectively utilizes heat in the atmosphere



Heat pump		SHP THERMIX		SHP CASSEN		SHP THERMIX	
Tank unit							
Performance							
1 Heating capacity (input)		438		437 / 235			
C.O.P (Outdoor temp. 20°C)		9/10		3.75			
1 Heating capacity (input)		438		437 / 45			
C.O.P (Outdoor temp. 7°C)		9/10		3.15			
1 Heating capacity (input)		438		437 / 48			
C.O.P (Outdoor temp. -17°C)		9/10		1.91			
Electrical Rating							
Power supply		Heat pump unit		230-240-240			
Tank unit		400 / 3-4				230 / 3-4	
Maximum current		30				30	
Tank unit							
Tank capacity				223			
Maximum working pressure		Agilent		1.5			
Auxiliary electric heater capacity		438				7.36	
Dimensions (Net height)		2000		1547 x 597 x 619			
Weight (Shipping Method)		1000		1738 x 790 x 1707			
Net/Shipping		kg		175.0 / 198.0			
Heat pump unit							
Refrigerant amount		kg		132 / 0.36			
Pressure (Sound level)		dB-A		40.0			
Compressor				DC Rotary two stage compressor			
Dimensions (Net height)		2000		5807 x 590 x 230			
Weight (Shipping Method)		1000		395 x 582 x 623			
Net/Shipping		kg		85.0 / 75.0			

Rating conditions
1, 2, 3: Underwater lamp (1 day) / 1 foot (2 day) / 30 day / 3
4: Underwater lamp (1 day) / 1 foot (2 day) / 30 day / 3
5: Underwater lamp (1 day) / 1 foot (2 day) / 30 day / 3



SHP-C45DEN SHP-TH22DDN/DHN

- Abundantly supply space heating and tap water
- Environmentally friendly with CO2 natural refrigerant
- Low ambient operation down to -20°C
- DC rotary 2 stage compressor
- High reliability, high efficiency
- Freeze protection circuit
- The unique construction of water-to-refrigerant heat exchanger ensure improved efficiency

Environmentally friendly

A natural refrigerant (CO2) heat pump hot water supplier that considers the global environment.

For its refrigerant, Sanyo "CO2 ECO" uses heat energy derived from compressed CO2, friendly to the ecosystem and our living environment. CO2 is an atoxic natural refrigerant with Ozone-Destruction Potential "0" and Global Warming Potential "1".

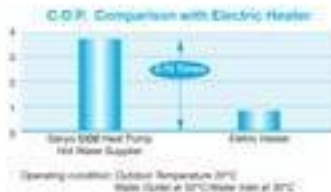
Characteristics of Natural Refrigerant CO2

Natural refrigerant	CO2	GWP	ODP
		1	0
R410A	R410A	2088	0.0219
R404C	R404C	3988	0.0219
R22	R22	1810	0.055

Economical

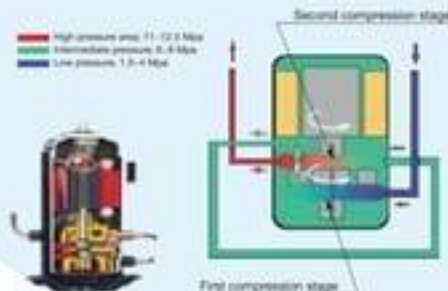
The high-efficiency heat pump method enable its superior energy-conservation capability.

The coefficient of performance (COP) is 3.73 for Sanyo "CO2 ECO" compared to 1 for electric heaters (standard condition).



Low ambient operation

With Sanyo "CO2 ECO", the heat pump operates continuously in the harsh condition of -32°C, maintaining its performance at no less than 4.0 kW. The consistent operation of the heat pump extremely low temperatures is made possible by the refrigerant circuit technology developed and refined by Sanyo. The heat pump operation of many models using "HCFC or HFC" as the refrigerant can only withstand the ambient temperature up to approximately -15°C. Electric heaters are required for temperatures below this level, resulting in performance that is not high in efficiency.



The world First CO2 ECO Rotary 2-stage Compression System

Sanyo "CO2 ECO" adopts the rotary 2-stage compressor, a creation of Sanyo original technology.

The outstanding performance of Sanyo's "2-stage compressor" supports the basic operation capability of "CO2 ECO".

Resistant to high working pressure
Internal intermediate pressure system
• easier to design shell (lower G.P.)

Resistant to large pressure difference

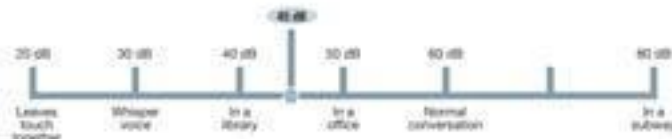
- 2-stage compression system
- high-reliability through load dispersion
- high efficiency (lower leakage loss)
- low vibration and low noise

High efficiency and lightweight design

- 2-stage compression system
- DC brushless motor and inverter drive
- high efficiency intensive winding motor with high-power neodymium magnet

Silent operation

With Sanyo "CO2 ECO" the noise level during operation is 45 dB-A.



SCP-AR081E5/EH5 • SCP-AR081E8/EH8
SCP-AR111E5 • SCP-AR111E8/EH8
SCP-AR151E8/EH8 • SCP-AR171E8/EH8

Power Range from 6.0 kW to 16.8 kW



SCP-AR...E/EH1



SCP-AR...E/EH

- High C.O.P
- Friendly to the eco-system refrigerant R410A

- Pump and expansion vessel integrated
- Does not require the installation of a buffer tank (1)

Water test Performance	SCP-AR081E5		SCP-AR081E8		SCP-AR111E5		SCP-AR111E8		SCP-AR151E8		SCP-AR171E8	
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	6.0	6.1	6.3	6.1	8.4	11.2	9.4	11.2	12.4	16.8	15.2	16.8
Rated power	6.0	6.0	6.0	6.0	8.4	11.2	9.4	11.2	12.4	16.8	15.2	16.8
U.L.A.C.O.P	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water flow	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Available pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Hydraulic connection diameter	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Power source type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Pressure control type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Outdoor connection water control (1)	1	1	1	1	1	1	1	1	1	1	1	1
Dimensions & Weight												
W400 x H400	400	400	400	400	400	400	400	400	400	400	400	400
Weight (kg)	15	15	15	15	15	15	15	15	15	15	15	15

Water test Performance	SCP-AR081E5		SCP-AR081E8		SCP-AR111E5		SCP-AR111E8		SCP-AR151E8		SCP-AR171E8	
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	6.0	6.1	6.3	6.1	8.4	11.2	9.4	11.2	12.4	16.8	15.2	16.8
Rated power	6.0	6.0	6.0	6.0	8.4	11.2	9.4	11.2	12.4	16.8	15.2	16.8
U.L.A.C.O.P	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water flow	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Available pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Hydraulic connection diameter	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Power source type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Pressure control type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Outdoor connection water control (1)	1	1	1	1	1	1	1	1	1	1	1	1
Dimensions & Weight												
W400 x H400	400	400	400	400	400	400	400	400	400	400	400	400
Weight (kg)	15	15	15	15	15	15	15	15	15	15	15	15

(1) Water control of the system is better achieved by installation of a storage tank in necessary.

Specification subject to change without notice.

Operating conditions	Operating range	Normal	Normal	Rated power level
• Outdoor air temperature	5°C	5°C	5°C	• 100% outdoor air flow
• Cold water temperature	10°C	10°C	10°C	• Heating capacity
• Cold water temperature	15°C	15°C	15°C	• Heating capacity

R410A

SCP-AR241E8 • SCP-AR271E8 • SCP-AR351E8
SCP-AR401E8 • SCP-AR201E8 • SCP-AR251E8
SCP-AR301E8 • SCP-AR401E8

Power Range from 20.8 kW to 39.0 kW



- High C.O.P
- Friendly to the eco-system refrigerant R407C

- Pump and expansion vessel integrated
- Does not require the installation of a buffer tank (1)

Water test Performance	SCP-AR241E8		SCP-AR271E8		SCP-AR351E8		SCP-AR401E8	
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Rated power	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
U.L.A.C.O.P	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water flow	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Available pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Hydraulic connection diameter	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Power source type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Pressure control type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Outdoor connection water control (1)	1	1	1	1	1	1	1	1
Dimensions & Weight								
W400 x H400	400	400	400	400	400	400	400	400
Weight (kg)	15	15	15	15	15	15	15	15

Water test Performance	SCP-AR241E8		SCP-AR271E8		SCP-AR351E8		SCP-AR401E8	
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Rated power	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
U.L.A.C.O.P	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water flow	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Available pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Water pump head	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Hydraulic connection diameter	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Power source type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Pressure control type	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V	AC 230V
Outdoor connection water control (1)	1	1	1	1	1	1	1	1
Dimensions & Weight								
W400 x H400	400	400	400	400	400	400	400	400
Weight (kg)	15	15	15	15	15	15	15	15

(1) Water control of the system is better achieved by installation of a storage tank in necessary.

Specification subject to change without notice.

Operating conditions	Operating range	Normal	Normal	Rated power level
• Outdoor air temperature	5°C	5°C	5°C	• 100% outdoor air flow
• Cold water temperature	10°C	10°C	10°C	• Heating capacity
• Cold water temperature	15°C	15°C	15°C	• Heating capacity

R407C

SCP-AR501EH/EH8 • SCP-AR601EH/EH8 • SCP-AR701EH/EH8
SCP-AR801EH/EH8

Power Range from 40.6 kW to 78.0 kW



- High C.O.P
- Friendly to the eco-system refrigerant R407C
- Built-in hydraulic module with pump, expansion tank, buffer tank

SCP-AR951EH8 • SCP-AR1001EH8 • SCP-AR1401EH8
SCP-AR1601EH8 • SCP-AR1001EH8 • SCP-AR1251EH8 • SCP-AR1401EH8

Power Range from 80.8 kW to 140 kW



New

- Eco-friendly R407C refrigerant
- High efficiency
- Built-in hydraulic module with pump, expansion tank and buffer tank

Water Unit	SCP-AR501EH		SCP-AR601EH		SCP-AR701EH		SCP-AR801EH		
Performance	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Capacity	kW	40.6	40.6	50.4	50.4	60.2	60.2	78.0	78.0
Rated power	kW	20.3	20.3	25.2	25.2	30.1	30.1	38.4	38.4
125°C LFL	kW	3.0	3.0	3.8	3.8	4.6	4.6	5.9	5.9
Water flow	m³/h	1.0	1.0	1.3	1.3	1.6	1.6	2.0	2.0
Available pump head	mPa	300	300	380	380	460	460	590	590
Max. water head	mPa	5000-6000							
Hydraulic connection diameter	mm	20							
Power supply tank	mm	1" (1")							
Pressure supply tank	mm	12							
System structure water supply (1)	mm	20							
Dimensions & Weight									
W x H x D	mm	1000 x 1000 x 1000		1000 x 1000 x 1000		1000 x 1000 x 1000		1000 x 1000 x 1000	
Weight	kg	300		350		400		500	

Water Unit Performance	SCP-AR951EH8		SCP-AR1001EH8		SCP-AR1401EH8		SCP-AR1601EH8		
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Capacity	kW	80.8	80.8	97.9	97.9	127.9	127.9	160.2	160.2
Rated power	kW	40.4	40.4	48.9	48.9	63.9	63.9	80.1	80.1
125°C LFL	kW	5.0	5.0	6.2	6.2	8.2	8.2	10.2	10.2
Water flow	m³/h	2.0	2.0	2.5	2.5	3.2	3.2	4.0	4.0
Available pump head	mPa	300	300	380	380	460	460	590	590
Max. water head	mPa	5000-6000							
Hydraulic connection diameter	mm	20							
Power supply tank	mm	1" (1")							
Pressure supply tank	mm	12							
System structure water supply (1)	mm	20							
Dimensions & Weight									
W x H x D	mm	1000 x 1000 x 1000		1000 x 1000 x 1000		1000 x 1000 x 1000		1000 x 1000 x 1000	
Weight	kg	300		350		400		500	

Water Unit Performance	SCP-AR501EH		SCP-AR601EH		SCP-AR701EH		SCP-AR801EH		
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Capacity	kW	40.6	40.6	50.4	50.4	60.2	60.2	78.0	78.0
Rated power	kW	20.3	20.3	25.2	25.2	30.1	30.1	38.4	38.4
125°C LFL	kW	3.0	3.0	3.8	3.8	4.6	4.6	5.9	5.9
Water flow	m³/h	1.0	1.0	1.3	1.3	1.6	1.6	2.0	2.0
Available pump head	mPa	300	300	380	380	460	460	590	590
Max. water head	mPa	5000-6000							
Hydraulic connection diameter	mm	20							
Power supply tank	mm	1" (1")							
Pressure supply tank	mm	12							
System structure water supply (1)	mm	20							
Dimensions & Weight									
W x H x D	mm	1000 x 1000 x 1000		1000 x 1000 x 1000		1000 x 1000 x 1000		1000 x 1000 x 1000	
Weight	kg	300		350		400		500	

Specifications subject to change without notice

Water Unit	SCP-AR951EH8	SCP-AR1001EH8	SCP-AR1401EH8	SCP-AR1601EH8
Performance	Cooling	Cooling	Cooling	Cooling
Capacity	80.8	97.9	127.9	160.2
Rated power	40.4	48.9	63.9	80.1
125°C LFL	5.0	6.2	8.2	10.2
Water flow	2.0	2.5	3.2	4.0
Available pump head	300	380	460	590
Max. water head	5000-6000			
Hydraulic connection diameter	20	2"		
Power supply tank	12	12		
Pressure supply tank	12	12		
Dimensions & Weight				
W x H x D	1000 x 1000 x 1000			
Weight	300	350	400	500

Specifications subject to change without notice

Operating conditions	Operating limits	Minimum	Maximum	Rated power limit
• Outdoor air temperature	32°C	-10°C to 40°C		• Not higher than the rated power
• Cold water temperature	12°C	-10°C to 40°C		• Maximum allowed
• Hot water temperature	72°C	-10°C to 40°C		• Not higher than the rated power

Operating conditions	Operating limits	Minimum	Maximum	Rated power limit
• Outdoor air temperature	32°C	-10°C to 40°C		• Not higher than the rated power
• Cold water temperature	12°C	-10°C to 40°C		• Maximum allowed
• Hot water temperature	72°C	-10°C to 40°C		• Not higher than the rated power

Note

