

SANYO



ECOi™

Variable Refrigerant Flow (VRF),
Multi-Zone, Heat Pump & Heat Recovery Systems

We are committed
to becoming an
indispensable element
in the lives of people
all over the world.

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INTRODUCTION

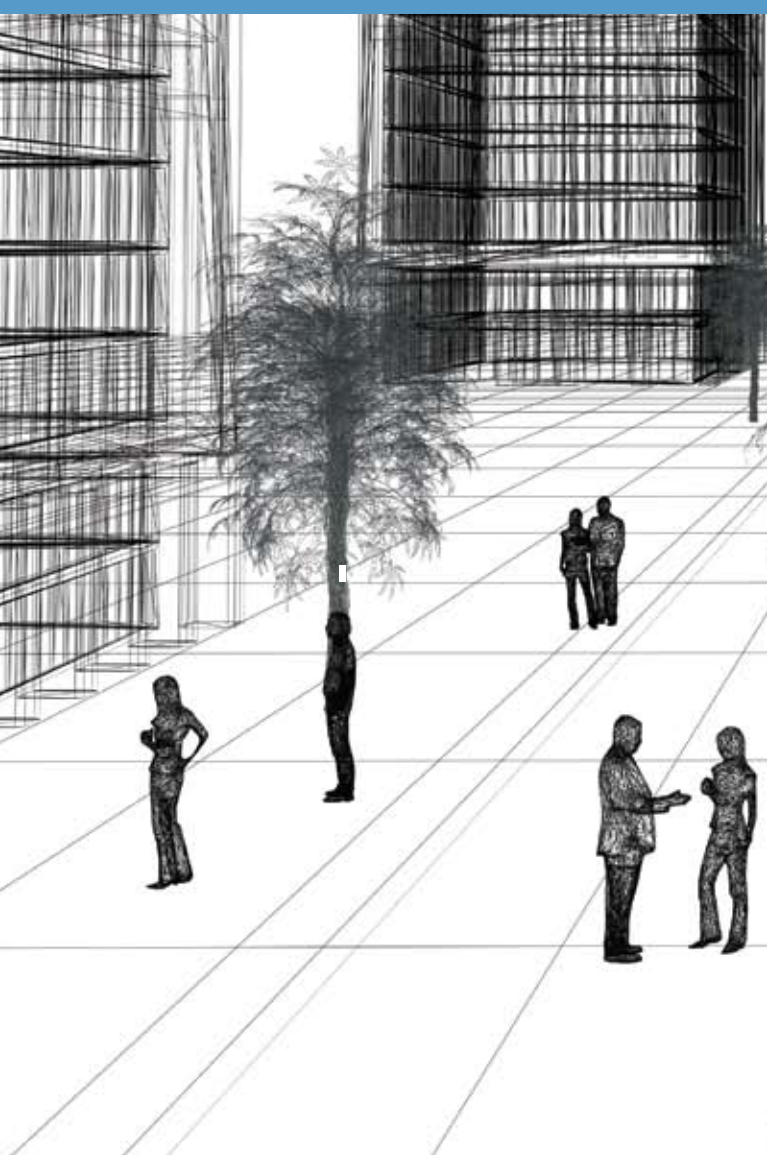
SANYO OUTDOOR

SANYO INDOOR

SANYO Control System

ACCESSORIES

SERVICES



SANYO's Brand Vision

SANYO HVAC consistently builds new ideas to help build your business. By delivering multi-zone options, space-saving and environmentally friendly designs, our solutions are evolving, improving solutions.

Flexible Combinations: ECOi allows multiple indoor unit combinations that provide you with the utmost in flexible solutions. The system also allows multiple unit connectivity providing up to 130% of the total capacity of the condensing unit. This provides for up to 17 indoor units connected to one condensing unit.

Inverter Control Compressor: All ECOi systems utilize highly advanced inverter controlled compressor technology. By varying the rotational speed of the compressor, the inverter control can precisely match the amount of refrigerant being delivered to the needs of each zone. This intelligent approach helps realize excellent efficiencies during partial-load conditions. This allows all occupants to enjoy consistent room temperature, regardless of any increases or decreases in the heat load during the day. ECOi quite simply knows what you need, and when you need it throughout the day. And even better, it does so with energy efficiency in mind.

Lower running and life cycle costs: SANYO Ecoi VRF systems are amongst the most efficient VRF systems on the market, offering COPs in excess of 4.0 at full load conditions. The system is also designed to make sure that we reduce the running cost of each system by using our unique road map control routine to ensure that the most efficient combination of compressors are running at any one time. Improved defrost sequencing also reduces running cost by defrosting each outdoor coil in turn when conditions allow.

ECOi™. Building Your Business.

SANYO has a proud global heritage and over 25 years experience in the United States. By delivering more multi-zone options, space-saving designs and offering solutions protect the environment. Our products reduce your energy costs and create a more comfortable environment.

Today every conditioning solution must answer multitudes of project needs, including tighter budgets, flexibility, energy efficiency and ease of installation, to name a few. ECOi is the answer. It's an all-in-one solution that responds to the many commercial and residential applications.

For the Living Inside & Out.

Contractors. Building Support.

At SANYO, we realize contractors are looking for turnkey installation and support. ECOi™ is quite simply the perfect building solution. With its modular design and ease of installation, it's a solution that can grow with any building project. In fact, ECOi may just make you remember why you got into the business in the first place.

Engineers. Designing Confidence.

ECOi™ is absolute confidence. Its flexibility allows multiple applications and installation configurations. With a maximum pipe length of up to 984 feet and up to 40 units connected to one outdoor system you can engineer a perfect solution for all your project needs. ECOi is a superior modular option that provides for floor-by-floor commissioning.

Architects. Design Freedom. Now There's An Idea.

Of course, nobody understands this more than the architects who design them. That's why the ECOi HVAC system provides more freedom to meet any design need. With space saving designs, environmental friendship and ultimate efficiency, you can design your vision first then marry our system fluidly within your plans.

Owners & Tenants.

With immediate response to changing room capacity heat loads and varying sun exposures throughout the day, everybody stays cool and comfortable. ECOi also ensures individual zone temperature control so each office or room can be adjusted for personalized comfort. ECOi can

grow with you. As remodeling occurs and building extensions are planned, ECOi's modularity lets you simply add on to the system. With intelligent controllers, VRF technology and R410A refrigerant, ECOi guarantees continued energy savings and environmental friendship for years to come.

ECOi™. Your Building Life Tool.

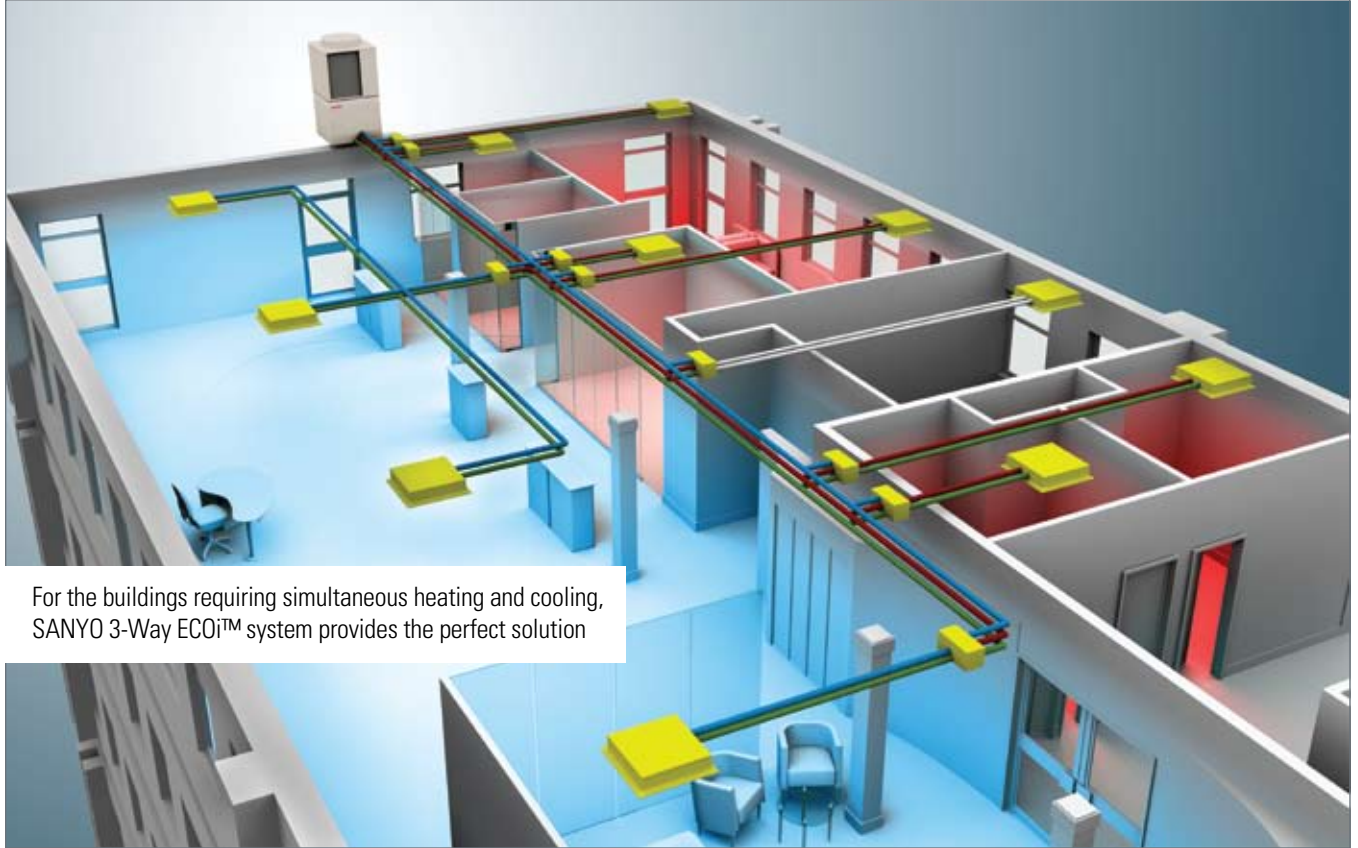
ECOi has a number of diverse features to meet all your conditioning needs, including: Flexible Combinations: ECOi allows multiple indoor unit combinations that provide you with the utmost in flexible solutions. The system also allows multiple unit connectivity providing up to 130% of the total capacity of the condensing unit. This provides for up to 17 indoor units connected to one condensing unit.

Inverter Control Compressor: All ECOi systems utilize highly advanced inverter controlled compressor technology. By varying the rotational speed of the compressor, the inverter control can precisely match the amount of refrigerant being delivered to the needs of each zone. This intelligent approach helps realize excellent efficiencies during partial-load conditions. This allows all occupants to enjoy consistent room temperature, regardless of any increases or decreases in the heat load during the day. ECOi quite simply knows what you need, and when you need it throughout the day. And even better, it does so with energy efficiency in mind.

3-Way ECOi™ VRF Heat Recovery

CHDZ SERIES

Commercial office buildings are subject to fluctuating heat levels generated from electronic office equipment, lighting and varying occupant levels. Also, hotels, nursing homes and other commercial living spaces often have times when occupants will want either heating or cooling at the same time. The heat recovery system offers the perfect solution for stabilizing the air temperature by providing all the features of a heat pump system - and the added flexibility of **simultaneous** cooling and heating from one refrigerant pipe network.

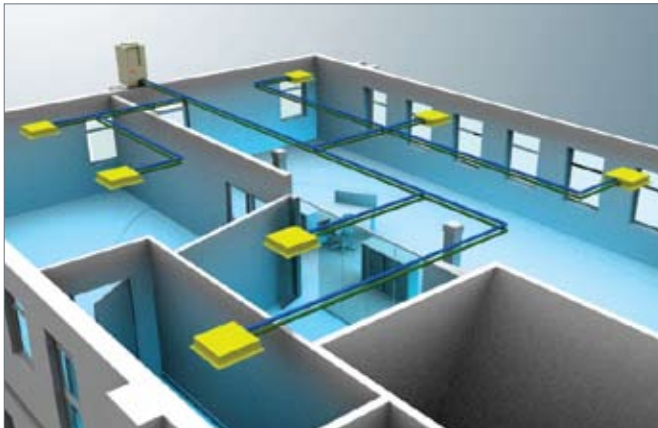
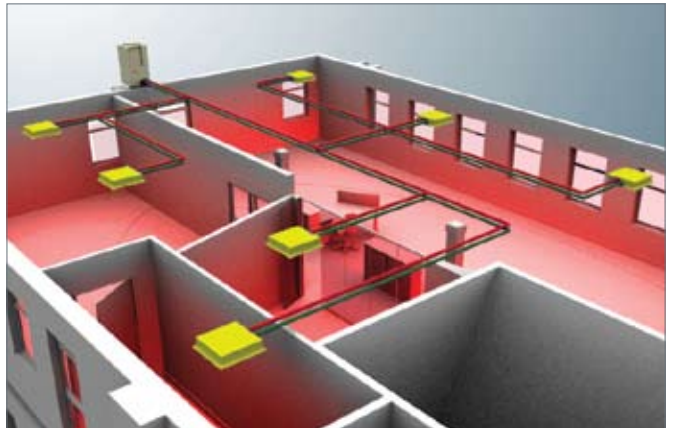


For the buildings requiring simultaneous heating and cooling, SANYO 3-Way ECOi™ system provides the perfect solution

2-Way ECOi™ VRF Heat Pump

CHX AND CHDX SERIES

SANYO's Combined ECOi 2-Way conditioning solution offers superior heating and cooling coupled with cost effective installation. A smart conditioning solution for large capacity jobs.

■ Cooling

■ Heating




SANYO's ECOi Heat Recovery series offers the ability to heat and cool different zones simultaneously. SANYO was the first manufacturer in the world to develop this energy saving heat recovery solution. Offering all the features of our standard heat pump series, the 3-Way solution can offer even higher energy savings for the building owner.

CHDZ 07263 / CHDZ (R)07263

CHDZ 09663 / CHDZ (R)09663

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * Heat Recovery system simultaneous heating-cooling
- * One Outdoor Unit Connects As Many As 16 Indoor Units (50%-130% ratio of indoor to outdoor capacity)
- * Heat Pump
- * One Outdoor Unit Connects As Many As 16 Indoor Units (50%-130% ratio of indoor to outdoor capacity)
- * CHDZ07263 includes one inverter driven Rotary compressor
- * CHDZ09663 includes one inverter driven Rotary compressor and one AC Constant Speed Scroll Compressor
- * Nominal Operating Range (Outdoor Ambient)
 - Cooling 14 FDB to 113 FDB
 - Heating -4 FWB to 59 FWB
- * Ultra Quiet Operation As Low As 51.5dB(a)
- * Variable Speed DC Fan Motor (ESP adjustable to 0.24" wc)
- * Flexible Piping Design:
 - 984 Feet - Maximum Total Liquid Line
 - 492 Feet - Maximum Outdoor To Most Distant Indoor Unit
 - 164 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Above Indoor)
 - 131 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Below Indoor)

MODELS	(Type: Nominal Cooling Capacity, etc)	Nominal Tons	Volt	PH	Connectable Indoor Units (Max.)
CHDZ 07263	72,000 BTU Heat Recovery	6	208-230V/60 HZ	3	12
CHDZ R07263	72,000 BTU Heat Recovery With Salt Protection - Special Order	6	208-230V/60 HZ	3	12
CHDZ 09663	96,000 BTU Heat Recovery	8	208-230V/60 HZ	3	16
CHDZ R09663	96,000 BTU Heat Recovery With Salt Protection - Special Order	8	208-230V/60 HZ	3	16

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**

DESCRIPTION	CHDZ (R) 07263	CHDZ (R) 09663
<p>PERFORMANCE</p> <p>COOLING CAPACITY: BTU/H POWER INPUT: KW HEATING CAPACITY: BTU/H POWER INPUT: KW</p>	<p>72,000 5.3 81,000 5.79</p>	<p>96,000 7.75 108,000 8.6</p>
<p>ELECTRICAL RATINGS</p> <p>VOLTAGE RATING COOLING RUNNING AMPERES HEATING RUNNING AMPERES MIN. CIRCUIT AMPACITY MAX. OVERCURRENT PROTECTION (MOCP): (A)</p>	<p>208 - 230 V 15.1 - 14.2 A 16.5 - 15.5 A 24 A 40 A</p>	<p>208 - 230 V 23.2 - 21.6 A 25.4 - 23.7 A 34 A 45 A</p>
<p>COMPRESSOR</p> <p>TYPE - QUANTITY MOTOR OUTPUT REFRIGERATION OIL TYPE REFRIGERATION OIL CHARGE AMOUNT CRANKCASE HEATER REFRIGERANT AMOUNT AT SHIPMENT REFRIGERANT CONTROL DEFROST METHOD HEAT EXCHANGER CAPACITY CONTROL</p>	<p>Inverter Driven Rotary Type 4.1 kw FV68S (Ether oil - PVE) 1.4 gal 25 w R410A - 25.9 lbs Electronic expansion valve Reverse-cycle, outdoor unit cycle Aluminum plate fin / Copper tube 10-100%</p>	<p>Inverter Driven Rotary 1 Fixed Scroll Hermetic (2.7 + 3.5) kw FV68S (Ether oil - PVE) 1.96 gal 25 + 32 w R410A - 25.9 lbs Electronic expansion valve Reverse-cycle, outdoor unit cycle Aluminum plate fin / Copper tube 8-100%</p>
<p>FAN DEVICE</p> <p>TYPE - QUANTITY MOTOR OUTPUT PROTECTIVE DEVICES CFM EXTERNAL STATIC PRESSURE</p>	<p>Propeller fan x 1 0.7 kw High pressure switch, overcurrent (CT method) 5.300 0.0 / 0.25 WC</p>	<p>Propeller fan x 1 0.7 kw High pressure switch, overcurrent (CT method) 5.650 0.0 / 0.25 WC</p>
<p>TUBING</p> <p>REFRIGERANT TUBING GAS TUBE REFRIGERANT TUBING LIQUID TUBE REF. TUBING DISCHARGE TUBE REFRIGERANT TUBING BALANCE TUBE EXTERNAL AIR TEMP. OPERATION RANGE OPERATION SOUND (HI)</p>	<p>3/4" (Brazing) ø3/8" (Brazing) ø5/8" (Brazing) ø3/8" (Flare) Cooling: 14 to 113 (DB) / Heating: -4 to 59 (WB) °F 54.5 (Quiet mode: 51.5) dB-A</p>	<p>ø7/8" (Brazing) ø3/8" (Brazing) ø3/4" (Brazing) ø3/8" (Flare) Cooling: 14 to 113 (DB) / Heating: -4 to 59 (WB) °F 55.0 (Quiet mode: 52.0) dB-A</p>
<p>UNIT DIMENSIONS</p> <p>Inches (") / lbs. Color (Munsell code)</p>	<p>82.5" / 35" / 35" / 573 lbs. Height/ Width/ Depth/ Net Weight Silky shade (1y 8.5/0.5)</p>	<p>82.5" / 35" / 35" / 672 lbs. Height/ Width/ Depth/ Net Weight Silky shade (1y 8.5/0.5)</p>

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**



WCHDZ 144
WCHDZ 168
WCHDZ 192



WCHDZ 216
WCHDZ 240
WCHDZ 264
WCHDZ 288

SANYO's Combined ECOi 3-Way conditioning solution offers superior heating and cooling coupled with cost effective installation. Providing a single refrigerant pipe network means there's only one penetration into the building and ultimately less piping material required, saving you time and money. A smart conditioning solution for large capacity jobs that require simultaneous heating and cooling.

WCHDZ 14463 / WCHDZ 16863 / WCHDZ 19263

WCHDZ 21663 / WCHDZ 24063

WCHDZ 26463 / WCHDZ 28863

KEY FEATURES:

- * Three-Way Heat Recovery
- * Combine 3 outdoor units up to 24 tons
- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 3 Phase, 60Hz
- * Multiple Compressors For Extra Reliability and Partial Redundancy
- * Nominal Operating Range (Outdoor Ambient)
 - Cooling 14 FDB to 113 FDB
 - Heating -4 FWB to 59 FWB
- * Ultra Quiet Operation As Low As 52dB(a)
- * Variable Speed DC Fan Motors
- * Flexible Piping Design:
 - 984 Feet - Maximum Total Liquid Line
 - 492 Feet - Maximum Outdoor To Most Distant Indoor Unit
 - 164 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Above Indoor)
 - 131 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Below Indoor)

WCHDZ HEAT RECOVERY COMBINED SERIES.

SYSTEM	Outdoor Unit	Cooling & Heating	Nominal Tons	Power input	Control Range	Connectable Indoor Units (Max)
WCHDZ 14463	CHDZ 07263 (quantity of 2)	144,000 & 162,000 BTU/H	12	10.6/ 11.6 kW	6 - 100%	24
WCHDZ 16863	CHDZ 07263 CHDZ 09663	168,000 & 189,000 BTU/H	14	13.1/ 14.4 kW	6 - 100%	29
WCHDZ 19263	CHDZ 09663 (quantity of 2)	192,000 & 216,000 BTU/H	16	15.5/ 17.2 kW	6 - 100%	33
WCHDZ 21663	CHDZ 07263 (quantity of 3)	216,000 & 243,000 BTU/H	18	15.9/ 17.4 kW	6 - 100%	37
WCHDZ 24063	CHDZ 07263 (quantity of 2) CHDZ 09663	240,000 & 270,000 BTU/H	20	18.4/ 20.2 kW	6 - 100%	40
WCHDZ 26463	CHDZ 09663 (quantity of 2) CHDZ 07263	264,000 & 297,000 BTU/H	22	20.8/ 23.0 kW	6 - 100%	40
WCHDZ 28863	CHDZ 09663 (quantity of 3)	288,000 & 324,000 BTU/H	24	23.3/ 25.8 kW	6 - 100%	40

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**

DESCRIPTION	WCHDZ 14463	WCHDZ 16863	WCHDZ 19263
PERFORMANCE COOLING CAPACITY: BTU/H POWER INPUT: KW HEATING CAPACITY: BTU/H POWER INPUT: KW	includes (1) CHDZ07263 and (1) CHDZ07263 144,000 10.6 162,000 11.6	includes (1)CHDZ07263 and (1) CHDZ09663 168,000 13.1 189,000 14.4	includes (1) CHDZ09663 and (1) CHDZ09663 192,000 15.5 216,000 17.2
COOLING MODE NOMINAL CONDITIONS INDOOR: °F WB/ °F DB OUTDOOR: °F DB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET	80/67 95 25 0	80/67 95 25 0	80/67 95 25 0
HEATING MODE NOMINAL CONDITIONS INDOOR: °F DB OUTDOOR: °F DB/ °F WB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET	70 47/43 25 0	70 47/43 25 0	70 47/43 25 0
NOMINAL OPERATING RANGE COOLING: °F DB HEATING: °F WB	14 to 113 -4 to 59	14 to 113 -4 to 59	14 to 113 -4 to 59
COMPRESSOR TYPE/QUANTITY CAPACITY CONTROL RANGE: %	2 Inverter driven Rotary 6 - 100%	2 Inverter driven Rotary & 1 fixed speed scroll 6 - 100%	2 Inverter driven Rotary & 2 fixed speed scroll 6 - 100%
FAN TYPE/QUANTITY FAN MOTOR OUTPUT: (KW) EXTERNAL STATIC PRESSURE	1 Propeller (ea) 0.7 kW (ea) 0.0 / 0.24 WC	1 Propeller (ea) 0.7 kW (ea) 0.0 / 0.24 WC	1 Propeller (ea) 0.7 kW (ea) 0.0 / 0.24 WC
POWER SUPPLY V/PH/HZ MINIMUM CIRCUITS AMPS (MCA): (A) MAX. OVERCURRENT PROTECTION (MOCP): (A)	208 - 230/ 3/ 60 52 80	208 - 230/ 3/ 60 60 85	208 - 230/ 3/ 60 68 90
WEIGHT: (LBS)	1146	1245	1344
COIL: COIL FACE AREA:(SQ. FT.) NUMBER OF ROWS:	29.5(ea) 4(ea)	29.5(ea) 4(ea)	29.5(ea) 4(ea)
PROTECTION DEVICES HIGH PRESSURE SWITCH/OVERCURRENT (CT METHOD) CRANKCASE HEATERS:(W)	Yes 25 + 25	Yes 25 + 25 + 32	Yes 25 + 32 X 2

EACH OUTDOOR UNIT REQUIRES A SEPARATE ELECTRICAL FUSED DISCONNECT, SEE INDIVIDUAL OUTDOOR REQUIREMENTS.

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**

DESCRIPTION	WCHDZ 21663	WCHDZ 24063	WCHDZ 26463	WCHDZ 28863
PERFORMANCE COOLING CAPACITY: BTU/H POWER INPUT: KW HEATING CAPACITY: BTU/H POWER INPUT: KW	includes (3) CHDZ07263 216,000 15.9 243,000 17.4	includes (2) CHDZ07263 and (1) CHDZ09663 240,000 18.4 270,000 20.2	includes (1) CHDZ07263 and (2) CHDZ09663 264,000 20.8 297,000 23.0	includes (3) CHDZ09663 288,000 23.3 324,000 25.8
COOLING MODE NOMINAL CONDITIONS INDOOR: °F WB/ °F DB OUTDOOR: °F DB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET	80/67 95 25 0	80/67 95 25 0	80/67 95 25 0	80/67 95 25 0
HEATING MODE NOMINAL CONDITIONS INDOOR: °F DB OUTDOOR: °F DB/ °F WB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET	70 47/43 25 0	70 47/43 25 0	70 47/43 25 0	70 47/43 25 0
NOMINAL OPERATING RANGE COOLING: °F DB HEATING: °F WB	14 to 113 -4 to 59	14 to 113 -4 to 59	14 to 113 -4 to 59	14 to 113 -4 to 59
COMPRESSOR TYPE/QUANTITY CAPACITY CONTROL RANGE: %	3 Inverter driven Rotary 6 - 100%	3 Inverter driven Rotary & 1 fixed speed scroll 6 - 100%	3 Inverter driven Rotary & 2 fixed speed scroll 6 - 100%	3 Inverter driven Rotary & 3 fixed speed scroll 6 - 100%
FAN TYPE/QUANTITY FAN MOTOR OUTPUT: (KW) EXTERNAL STATIC PRESSURE	1 Propeller (ea) 0.7 kW 0.0 / 0.24 WC	1 Propeller (ea) 0.7 kW 0.0 / 0.24 WC	1 Propeller (ea) 0.7 kW 0.0 / 0.24 WC	1 Propeller (ea) 0.7 kW 0.0 / 0.24 WC
POWER SUPPLY V/PH/HZ MINIMUM CIRCUITS AMPS (MCA): (A) MAX. OVERCURRENT PROTECTION (MOC): (A)	208 - 230/ 3/ 60 78 120	208 - 230/ 3/ 60 86 125	208 - 230/ 3/ 60 94 130	208 - 230/ 3/ 60 102 135
WEIGHT: (LBS)	1719	1818	1917	2016
COIL: COIL FACE AREA:(SQ. FT.) NUMBER OF ROWS:	29.5(ea) 4(ea)	29.5 (ea) 4	29.5 (ea) 4	29.5 (ea) 4
PROTECTION DEVICES HIGH PRESSURE SWITCH/OVERCURRENT (CT METHOD) CRANKCASE HEATERS:(W)	Yes 25 + 25 + 25	Yes 25 + 25 + 25 + 32	Yes (2 X 25 + 32) + 25	Yes 3 X 25 + 32

EACH OUTDOOR UNIT REQUIRES A SEPARATE ELECTRICAL FUSED DISCONNECT, SEE INDIVIDUAL OUTDOOR REQUIREMENTS.

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**



SANYO's Mini ECOi is suited for numerous commercial and premium residential applications.

CHX (R) 03652 / CHX (R) 05252

KEY FEATURES:

- * Single Phase 208/230 volts
- * One Outdoor Unit Connects As Many As 9 Indoor Units (50%-130% ratio of indoor to outdoor capacity)
- * Inverter Driven Twin Rotary Compressor
- * Nominal Operating Range (Outdoor Ambient)
 - Cooling 14 FDB to 113 FDB
 - Heating -4 FWB to 59 FWB
- * Ultra Quiet Operation As Low As 48dB(a)
- * Variable Speed DC Fan Motor
- * Piping:
 - 656 Feet - Maximum Total Liquid Line
 - 164 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Above Indoor)
 - 131 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Below Indoor)
- * Defrost control, Reverse cycle, microprocessor control
- * External finish: Galvanized steel plate with powder paint
- * Refrigerant control: Electronic expansion valve

DESCRIPTION	CHX (R) 03652			CHX (R) 05252		
POWER SOURCE	208-230V/1PH/60Hz			208-230V/1PH/60Hz		
PERFORMANCE	Ducted	Non-Ducted	Mix	Ducted	Non-Ducted	Mix
COOLING CAPACITY	40,000	39,000	39,000 BTU/H	51,500	52,000	51,500 BTU/H
SEER	14.20	16.40	15.30	14.6	17.3	16
HEATING CAPACITY	40,500	42,500	41,500 BTU/H	57,500	58,000	58,500 BTU/H
HSPF	8.20	9.60	8.90	7.7	9.5	8.6
AIR CIRCULATION (HI)	3,530 CFM			3,530 CFM		
ELECTRICAL RATINGS	COOLING		HEATING	COOLING		HEATING
VOLTAGE RATING	208 / 230 V		208 / 230 V	208 / 230 V		208 / 230 V
AVAILABLE VOLTAGE RANGE	187—253 V		187—253 V	187—253 V		187—253 V
RUNNING AMPERES	14.6 / 13.6 A		14.6 / 13.6 A	23.5 / 21.9 A		23.5 / 21.9 A
MAX. RUNNING AMPERES	23.6 / 23.6 A		23.6 / 23.6 A	28 / 28 A		28 / 28 A
POWER INPUT	2.76 / 2.76 Kw		2.88 / 2.88 Kw	4.57 / 4.57 Kw		4.58 / 4.58 Kw
MAX. POWER INPUT	4.85 / 4.85 Kw		4.85 / 4.85 Kw	5.72 / 5.72 Kw		5.7 2 / 5.72 Kw
MIN. CIRCUIT AMPACITY			18 A			29 A
MAX. OVERCURRENT PROTECTION (MOCP)			30 A			50 A
REFRIGERANT TUBING						
LIMIT OF TUBING LENGTH	656 ft			656 ft		
LIMIT OF ELEVATION DIFFERENCE BETWEEN THE 2 UNITS	Outdoor unit is higher than indoor unit: 164 Outdoor unit is lower than indoor unit: 131			Outdoor unit is higher than indoor unit: 164 Outdoor unit is lower than indoor unit: 131		
REFRIGERANT TUBE DIAMETER						
LIQUID TUBE IN.	3/8"			3/8"		
GAS TUBE IN.	5/8"			3/4"		
UNIT DIMENSIONS	Height/ Width/ Depth/ Net Weight 49" / 37" / 14" / 229 lbs. SHIPPING WEIGH / VOLUME 247 lbs. / 19.8 ft. ³			Height/ Width/ Depth/ Net Weight 49" / 37" / 14" / 229 lbs. 247 lbs. / 19.8 ft. ³		
EXTERNAL AIR TEMP. OPERATION RANGE	Cooling:14 to 113 (DB)/Heating: -4 to 59 (WB)			Cooling:14 to 113 (DB)/Heating: -4 to 59 (WB)		
CONNECTABLE INDOOR UNITS (MAX)	6			9		

*** NOTE: *(R) in Model # indicates Salt Protection - Special Order**



SANYO's ECOi is an all-in-one modular conditioning solution. Suited for numerous commercial and industrial applications it offers flexible installation, superior heating and cooling.

CHDX 07263 / CHDX (R) 07263
CHDX 09663 / CHDX (R) 09663

KEY FEATURES:

- * One Outdoor Unit Connects As Many As 16 Indoor Units (50%-130% ratio of indoor to outdoor capacity)
- * CHDX07263 one Inverter Driven Rotary Compressor
- * CHDX09663 includes one Inverter Driven Rotary Compressor and One AC Constant Speed Scroll Compressor
- * Nominal Operating Range (Outdoor Ambient)
 - Cooling 14 FDB to 113 FDB
 - Heating -4 FWB to 59 FWB
- * Ultra Quiet Operation As Low As 52dB(a)
- * Variable Speed DC Fan Motor (ESP adjustable to 0.24" wc)
- * Flexible Piping Design:
 - 984 Feet - Maximum Total Liquid Line
 - 492 Feet - Maximum Outdoor To Most Distant Indoor Unit
 - 164 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Above Indoor)
 - 131 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Below Indoor)

(R) indicates with salt protection - Special Order

DESCRIPTION	(Type: Nominal Cooling Capacity, etc)	Nominal Tons	Volt	PH	Connectable Indoor Units (Max)
CHDX 07263 *	72,000 BTU Heat Pump	6	208-230V/60 HZ	3	12
CHDX (R) 07263 *	72,000 BTU Heat Pump With Salt Protection - Special Order	6	208-230V/60 HZ	3	12
CHDX 09663 *	96,000 BTU Heat Pump	8	208-230V/60 HZ	3	16
CHDX (R) 09663 *	96,000 BTU Heat Pump With Salt Protection - Special Order	8	208-230V/60 HZ	3	16

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**

DESCRIPTION	CHDX (R) 07263	CHDX (R) 09663
<p>PERFORMANCE</p> <p>COOLING CAPACITY: BTU/H POWER INPUT: KW HEATING CAPACITY: BTU/H POWER INPUT: KW</p>	<p>72,000 5.28 81,000 5.79</p>	<p>96,000 7.69 108,000 8.6</p>
<p>ELECTRICAL RATINGS</p> <p>VOLTAGE RATING COOLING RUNNING AMPERES HEATING RUNNING AMPERES MIN. CIRCUIT AMPACITY MAX. OVERCURRENT PROTECTION (MOCP)</p>	<p>208 - 230 V 15.1 - 14.1 A 16.5 - 15.5 A 26 A 40 A</p>	<p>208 - 230 V 23.0 - 21.4 A 25.4 - 23.7 b A 34 A 45 A</p>
<p>COMPRESSOR</p> <p>TYPE - QUANTITY MOTOR OUTPUT REFRIGERATION OIL TYPE REFRIGERATION OIL CHARGE AMOUNT CRANKCASE HEATER REFRIGERANT AMOUNT AT SHIPMENT REFRIGERANT CONTROL DEFROST METHOD HEAT EXCHANGER CAPACITY CONTROL</p>	<p>Inverter Driven Rotary Type 4.1 kw FV68S (Ether oil - PVE) 1.4 gal 25 w R410A - 25.9 lbs Electronic expansion valve Reverse-cycle, outdoor unit cycle Aluminum plate fin / Copper tube 10-100%</p>	<p>Inverter Driven Rotary (3 + 3.75) kw FV68S (Ether oil) 1.56 gal 25 + 32 w R410A - 25.9 lbs Electronic expansion valve Reverse-cycle, outdoor unit cycle Aluminum plate fin / Copper tube 8-100%</p>
<p>FAN DEVICE</p> <p>TYPE - QUANTITY MOTOR OUTPUT PROTECTIVE DEVICES CFM EXTERNAL STATIC PRESSURE</p>	<p>Propeller fan x 1 0.7 kw High pressure switch, overcurrent (CT method) 5.300 0.0 / 0.24 WC</p>	<p>Propeller fan x 1 0.7 kw High pressure switch, overcurrent (CT method) 5.650 0.0 / 0.24 WC</p>
<p>TUBING</p> <p>REFRIGERANT TUBING GAS TUBE REFRIGERANT TUBING LIQUID TUBE REFRIGERANT TUBING BALANCE TUBE EXTERNAL AIR TEMP. OPERATION RANGE OPERATION SOUND (HI)</p>	<p>3/4" (Brazing) ø3/8" (Brazing) ø3/8" (Flare) Cooling: 14 to 113 (DB) / Heating: -4 to 59 (WB) °F 54.5 (Quiet mode: 51.5) dB-A</p>	<p>7/8" (Brazing) 3/8" (Brazing) ø3/8" (Flare) Cooling: 14 to 113 (DB) / Heating: -4 to 38 (WB) °F 55.0 (Quiet mode: 52.0) dB-A</p>
<p>UNIT DIMENSIONS</p> <p>Inches (") / lbs. Color (Munsell code)</p>	<p>82.5" / 35" / 35" / 584 lbs. Height/ Width/ Depth/ Net Weight Silky shade (1y 8.5/0.5)</p>	<p>82.5" / 35" / 35" / 683 lbs. Height/ Width/ Depth/ Net Weight Silky shade (1y 8.5/0.5)</p>

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**

WCHDX SERIES

W 2-Way ECOi VRF Heat Pumps combined units



WCHDX 144
WCHDX 168
WCHDX 192



WCHDX 216
WCHDX 240
WCHDX 264
WCHDX 288

SANYO's Combined ECOi outdoor units offer superior heating and cooling coupled with cost effective installation. Providing a single refrigerant pipe network means there's only one penetration into the building and ultimately less piping material required, saving you time and money. A smart conditioning solution for large capacity jobs.

WCHDX 14463 / WCHDX 16863 / WCHDX 19263

WCHDX 21663 / WCHDX 24063

WCHDX 26463 / WCHDX 28863

KEY FEATURES:

- * Heat Pump
- * Combine 3 outdoor units up to 24 tons
- * Combined Series Allows Up to 40 Indoor Units (50%-130% ratio of indoor to outdoor capacity)
- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 3 Phase, 60Hz
- * Multiple Compressors For Precise and Efficient Operation
- * Nominal Operating Range (Outdoor Ambient)
 - Cooling 14 FDB to 113 FDB
 - Heating -4 FWB to 59 FWB
- * Ultra Quiet Operation As Low As 51.5dB(a)
- * Variable Speed DC Fan Motors
- * Flexible Piping Design:
 - 984 Feet - Maximum Total Liquid Line
 - 492 Feet - Maximum Outdoor To Most Distant Indoor Unit
 - 164 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Above Indoor)
 - 131 Feet - Maximum Vertical Between Indoor and Outdoor (Outdoor Below Indoor)

WCHDX COMBINED SERIES.

SYSTEM	Outdoor Unit	Cooling & Heating	Nominal Tons	Power input 208/230	Control Range	Connectable Indoor Units (Max)
WCHDX 14463	CHDX 07263 (quantity of 2)	144,000 & 162,000 BTU/H	12	10.56/11.58 kW	6 - 100%	24
WCHDX 16863	CHDX 07263 CHDX 09663	168,000 & 189,000 BTU/H	14	12.97/ 14.39 kW	6 - 100%	29
WCHDX 19263	CHDX 09663 (quantity of 2)	192,000 & 216,000 BTU/H	16	15.38/ 17.2 kW	6- 100%	33
WCHDX 21663	CHDX 07263 (quantity of 3)	216,000 & 243,000 BTU/H	18	15.84/ 17.37 kW	6 - 100%	37
WCHDX 24063	CHDX 07263 (quantity of 2) CHDX 09663	240,000 & 270,000 BTU/H	20	18.25/ 20.18 kW	6- 100%	40
WCHDX 26463	CHDX 09663 (quantity of 2) CHDX 07263	264,000 & 297,000 BTU/H	22	20.66/ 22.99 kW	6 - 100%	40
WCHDX 28863	CHDX 09663 (quantity of 3)	288,000 & 324,000 BTU/H	24	23.07/ 25.8 kW	6 - 100%	40

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**

DESCRIPTION	WCHDX 14463	WCHDX 16863	WCHDX 19263
PERFORMANCE COOLING CAPACITY: BTU/H POWER INPUT: KW HEATING CAPACITY: BTU/H POWER INPUT: KW	includes (2) CHDX07263 144,000 10.56 162,000 11.58	includes (1) CHDX07263 and (1) CHDX09663 168,000 12.97 189,000 14.39	includes (2) CHDX09663 192,000 15.38 216,000 17.2
COOLING MODE NOMINAL CONDITIONS INDOOR: °F WB/ °F DB OUTDOOR: °F DB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET	80/67 95 25 0	80/67 95 25 0	80/67 95 25 0
HEATING MODE NOMINAL CONDITIONS INDOOR: °F DB OUTDOOR: °F DB/ °F WB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET	70 47/43 25 0	70 47/43 25 0	70 47/43 25 0
NOMINAL OPERATING RANGE COOLING: °F DB HEATING: °F WB	14 to 113 -4 to 59	14 to 113 -4 to 59	14 to 113 -4 to 59
COMPRESSOR TYPE/QUANTITY CAPACITY CONTROL RANGE: %	2 Inverter driven Rotary 6 - 100%	2 Inverter driven Rotary & 1 fixed speed scroll 6-100%	2 Inverter driven Rotary & 2 fixed speed scroll 6-100%
FAN TYPE/QUANTITY FAN MOTOR OUTPUT: (KW) EXTERNAL STATIC PRESSURE	1 Propeller (ea) 0.7 kW (ea) 0.0 / .24 WC	1 Propeller (ea) 0.7 kW (ea) 0.0 / .24 WC	1 Propeller (ea) 0.7 kW (ea) 0.0 / .24 WC
POWER SUPPLY V/PH/HZ MINIMUM CIRCUITS AMPS (MCA): (A) MAX. OVERCURRENT PROTECTION (MOCP): (A)	208 - 230/ 3/ 60 52 80	208 - 230/ 3/ 60 60 85	208 - 230/ 3/ 60 68 90
WEIGHT: (LBS)	1168	1267	1366
COIL: COIL FACE AREA:(SQ. FT.) NUMBER OF ROWS:	29.5(ea) 4(ea)	29.5(ea) 4(ea)	29.5(ea) 4(ea)
PROTECTION DEVICES HIGH PRESSURE SWITCH/OVERCURRENT (CT METHOD) CRANKCASE HEATERS:(W)	Yes 25 + 25	Yes 25 + 25 + 32	Yes 25 + 32 X 2

EACH OUTDOOR UNIT REQUIRES A SEPARATE ELECTRICAL FUSED DISCONNECT, SEE INDIVIDUAL OUTDOOR REQUIREMENTS.

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**

DESCRIPTION	WCHDX 21663	WCHDX 24063	WCHDX 26463	WCHDX 28863
<p>PERFORMANCE</p> <p>COOLING CAPACITY: BTU/H POWER INPUT: KW HEATING CAPACITY: BTU/H POWER INPUT: KW</p>	<p>includes (3) CHDX07263</p> <p>216,000 15.84 243,000 17.37</p>	<p>includes (2) CDDX07263 and (1) CHDX09663</p> <p>240,000 18.25 270,000 20.18</p>	<p>includes (1) CHDX07263 and (2) CHDX09663</p> <p>264,000 20.66 297,000 22.99</p>	<p>includes (3) CHDX09663</p> <p>288,000 23.07 324,000 25.8</p>
<p>COOLING MODE NOMINAL CONDITIONS</p> <p>INDOOR: °F WB/ °F DB OUTDOOR: °F DB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET</p>	<p>80/67 95 25 0</p>	<p>80/67 95 25 0</p>	<p>80/67 95 25 0</p>	<p>80/67 95 25 0</p>
<p>HEATING MODE NOMINAL CONDITIONS</p> <p>INDOOR: °F DB OUTDOOR: °F DB/ °F WB PIPE LENGTH: FEET LEVEL DIFFERENCE: FEET</p>	<p>70 47/43 25 0</p>	<p>70 47/43 25 0</p>	<p>70 47/43 25 0</p>	<p>70 47/43 25 0</p>
<p>NOMINAL OPERATING RANGE</p> <p>COOLING: °F DB HEATING: °F WB</p>	<p>14 to 113 -4 to 59</p>	<p>14 to 113 -4 to 59</p>	<p>14 to 113 -4 to 59</p>	<p>14 to 113 -4 to 59</p>
<p>COMPRESSOR</p> <p>TYPE/QUANTITY CAPACITY CONTROL RANGE: %</p>	<p>3 Inverter driven Rotary 6 - 100%</p>	<p>3 Inverter driven Rotary & 1 fixed speed scroll 6 - 100%</p>	<p>3 Inverter driven Rotary & 2 fixed speed scroll 6 - 100%</p>	<p>3 Inverter driven Rotary & 3 fixed speed scroll 6 - 100%</p>
<p>FAN</p> <p>TYPE/QUANTITY FAN MOTOR OUTPUT: (KW) EXTERNAL STATIC PRESSURE</p>	<p>1 Propeller (ea) 0.7 kW (ea) 0.0 / .24 WC</p>	<p>1 Propeller (ea) 0.7 kW (ea) 0.0 / .24 WC</p>	<p>1 Propeller (ea) 0.7 kW (ea) 0.0 / .24 WC</p>	<p>1 Propeller 0.7 kW 0.0 / .24 WC</p>
<p>POWER SUPPLY</p> <p>V/PH/Hz MINIMUM CIRCUITS AMPS (MCA): (A) MAX. OVERCURRENT PROTECTION (MOCP): (A)</p>	<p>208 - 230/ 3/ 60 78 120</p>	<p>208 - 230/ 3/ 60 86 125</p>	<p>208 - 230/ 3/ 60 94 130</p>	<p>208 - 230/ 3/ 60 102 135</p>
<p>WEIGHT: (LBS)</p>	1752	1851	1950	2049
<p>COIL:</p> <p>COIL FACE AREA:(SQ. FT.) NUMBER OF ROWS:</p>	<p>29.5(ea) 4(ea)</p>	<p>29.5(ea) 4(ea)</p>	<p>29.5(ea) 4(ea)</p>	<p>29.5(ea) 4(ea)</p>
<p>PROTECTION DEVICES</p> <p>HIGH PRESSURE SWITCH/OVERCURRENT (CT METHOD) CRANKCASE HEATERS:(W)</p>	<p>Yes 25 + 25 + 25</p>	<p>Yes 25 + 25 + 25 + 32</p>	<p>Yes (2 X 25 + 32) + 25</p>	<p>Yes 3 X 25 + 32</p>

EACH OUTDOOR UNIT REQUIRES A SEPARATE ELECTRICAL FUSED DISCONNECT, SEE INDIVIDUAL OUTDOOR REQUIREMENTS.

(R) indicates with salt protection - Special Order

*** NOTE: *460 Volt Step Down Transformers (460-230) available for 6 and 8 ton condensers**



SANYO's wall-mounted units work well with any interior design. Flexible and compact, offering individualized zoned comfort for complete temperature control throughout the day. Over five different air flow directions and wireless remotes provide control in the palm of your hand.

KHX 0752 / KHX 0952 / KHX 1252 / KHX 1862
KHX 1962 / KHX 2452 / ATK-SVRK56BA

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Easy Wall Mount for Any Application
- * Washable Long Life Filter
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Light Weight, Only 31 lbs. (KHX2452 is 46 lbs.)
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed control
- * Easy Service

SANYO INDOOR

MODELS	(Type: Nominal Cooling Capacity, etc)	Volt	PH
KHX 0752	7500 BTU	208-230V/60 HZ	1
KHX 0952	9600 BTU	208-230V/60 HZ	1
KHX 1252	12000 BTU	208-230V/60 HZ	1
KHX 1862	18000 BTU	208-230V/60 HZ	1
KHX 1962	19000 BTU (special order)	208-230V/60 HZ	1
KHX 2452	25000 BTU	208-230V/60 HZ	1
ATK-SVRK56BA	External EEV (required for use with KHX 1962)	N/A	N/A

DESCRIPTION	KHX 0752	KHX 0952	KHX 1252	KHX 1862	KHX 1962 needs ATK-SVRK56BA	KHX 2452
PERFORMANCE						
COOLING CAPACITY	7,500 BTU/H	9,600 BTU/H	12,000 BTU/H	18,000 BTU/H	19,000 BTU/H	25,000 BTU/H
HEATING CAPACITY	8,500 BTU/H	11,000 BTU/H	14,000 BTU/H	20,000 BTU/H	21,000 BTU/H	27,000 BTU/H
CURRENT						
COOLING	0.25/0.26 A	0.20/0.21 A	0.20/0.21 A	0.30/0.32 A	0.30/0.32 A	0.37/0.39 A
HEATING	0.25/0.26 A	0.20/0.21 A	0.20/0.21 A	0.30/0.32 A	0.30/0.32 A	0.38/0.32 A
POWER INPUT						
COOLING	50/56 W	50/56 W	50/56 W	61/72 W	61/72 W	72/83 W
HEATING	50/56 W	50/56 W	50/56 W	61/72 W	61/72 W	72/83 W
HEAT EXCHANGER						
FAN TYPE X QUANTITY	CROSS FLOW X1	CROSS FLOW X1	CROSS FLOW X1	CROSS FLOW X1	CROSS FLOW X1	CROSS FLOW X1
FAN AIRFLOW RATE	350/280/210	350/280/210	350/280/210	565/495/353	565/495/353	565/495/350
FAN EXT. STATIC PRESS (230V)	0 IN. WC	0 IN. WC	0 IN. WC	0 IN. WC	0 IN. WC	0 IN. WC
FAN MOTOR TYPE	AC	AC	AC	AC	AC	AC
FAN MOTOR OUTPUT	30 W	30 W	30 W	30 W	30 W	30 W
REFRIGERANT PIPE DIMENSIONS						
LOW PRESSURE (FLARE)	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"
HIGH PRESSURE (FLARE)	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"
UNIT DIMENSIONS	11.5" / 39.5" / 8" / 31 LBS.			13" / 45" / 9" / 46 LBS.		
Inches (") / lbs.	HEIGHT / WIDTH / DEPTH / NET WEIGHT			HEIGHT / WIDTH / DEPTH / NET WEIGHT		
DRAINPIPE DIMENSION	3/4" OD					
SOUND LEVELS						
(LOW-MED-HIGH) DB(A) @ 230V	28/32/36	28/32/36	28/32/36	35/38/42	35/38/42	35/38/42



SANYO's 4-Way semi-concealed ceiling units are flexible, efficient and space-saving. Now available to fit within standard 24"x24" ceiling grids.

12 XMHX 52 / 18 XMHX 52

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Four Way Air Throw
- * Washable Long Life Air Filter
- * Built-In Drain Pump – 25 Inch Lift
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * A Low Profile Unit Perfectly Suited for Compact Ceiling Voids (as little as 12-14 inches)
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed control
- * Easy Service
- * Optional Fresh Air Intake

SYSTEM/MODEL	Components	(Type: Nominal Cooling Capacity, etc)	Volt	PH
12 XMHX 52	System	12000 BTU 4-Way Ceiling cassette 24" x 24" (includes grille)	208-230V/1ø/60 HZ	1
	XMHX 1252	cassette	208-230V/1ø/60 HZ	1
	PNR-XMH1852	grille		
18 XMHX 52	System	18000 BTU 4-way Ceiling cassette 24" x 24" (includes grille)	208-230V/1ø/60 HZ	1
	XMHX 1852	cassette	208-230V/1ø/60 HZ	1
	PNR-XMH1852	grille		

DESCRIPTION	12 XMHX 52	18 XMHX 52
PERFORMANCE		
COOLING CAPACITY	12,000 BTU/H	19,000 BTU/H
HEATING CAPACITY	14,000 BTU/H	21,000 BTU/H
CURRENT		
COOLING	0.22/0.20 A	0.30/0.32 A
HEATING	0.19/0.17 A	0.27/0.30 A
POWER INPUT		
COOLING	38/43 W	52/56 W
HEATING	30/35 W	48/47 W
HEAT EXCHANGER		
FAN TYPE X QUANTITY	TURBO X1	TURBO X1
FAN AIRFLOW RATE	320/280/250	440/370/320
FAN MOTOR TYPE	DC	DC
FAN MOTOR OUTPUT	20 W	20 W
REFRIGERANT PIPE DIMENSIONS		
LOW PRESSURE (FLARE)	1/4"	1/4"
HIGH PRESSURE (FLARE)	1/2"	1/2"
UNIT DIMENSIONS	12.5"/ 24.75"/ 24.75"/ 41 LBS. Inches (")/ lbs. HEIGHT/ WIDTH/ DEPTH/ NET WEIGHT	
DRAINPIPE DIMENSION	1 1/4" OD	
SOUND LEVELS		
(LOW-MED-HIGH) DB(A) @ 230V	27/29/31	33/37/41

4-WAY AIR DISCHARGE
24" X 24" SYSTEM
(INCLUDES GRILLE)

4-Way Ceiling Cassette 35" x 35", with Condensate Pump

XHX SERIES



SANYO's 4-Way semi-concealed ceiling units are flexible, efficient and space-saving. Two sides can be adjusted simply to accommodate corner airflow.

24 XHX 52 / 36 XHX 52

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Four Way Air Throw
- * Washable Long Life Air Filter
- * Built-In Drain Pump – 25 Inch Lift
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * A Low Profile Unit Perfectly Suited for Compact Ceiling Voids (as little as 12-14 inches)
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed control
- * Easy Service
- * Branch Duct Available
- * Optional Fresh Air Intake

SANYO INDOOR

SYSTEM/MODEL	Components	(Type: Nominal Cooling Capacity, etc)	Volt	PH
24 XHX 52	System	25000 BTU 4-Way Ceiling cassette 35" x 35" (includes grille)	208-230V/60 HZ	1
	XHX 2452	cassette	208-230V/60 HZ	1
	PNR-XH3652	grille		
36 XHX 52	System	36000 BTU 4-Way Ceiling cassette 35" x 35" (includes grille)	208-230V/60 HZ	1
	XHX 3652	cassette	208-230V/60 HZ	1
	PNR-XH3652	grille		

DESCRIPTION	24 XHX 52	36 XHX 52
PERFORMANCE		
COOLING CAPACITY	25,000 BTU/H	36,000 BTU/H
HEATING CAPACITY	27,000 BTU/H	39,000 BTU/H
CURRENT		
COOLING	0.29/0.26 A	0.51/0.46 A
HEATING	0.30/0.31 A	0.54/0.49 A
POWER INPUT		
COOLING	38/40 W	74/79 W
HEATING	33/33 W	76/76 W
HEAT EXCHANGER		
FAN TYPE X QUANTITY	TURBO X1	TURBO X1
FAN AIRFLOW RATE	705/565/495	990/810/740
FAN MOTOR TYPE	DC	DC
FAN MOTOR OUTPUT	50 W	90 W
REFRIGERANT PIPE DIMENSIONS		
LOW PRESSURE (FLARE)	3/8"	3/8"
HIGH PRESSURE (FLARE)	5/8"	5/8"
UNIT DIMENSIONS		
Inches (") / lbs.	12" / 35" / 35" / 58 LBS.	12" / 35" / 35" / 58 LBS.
	HEIGHT/ WIDTH/ DEPTH/ NET WEIGHT	HEIGHT/WIDTH/DEPTH/NET WEIGHT
DRAINPIPE DIMENSION	1 1/4" OD	
SOUND LEVELS		
(LOW-MED-HIGH) DB(A) @ 230V	28/31/34	33/36/39

TWO SIDES CAN BE ADJUSTED SIMPLY TO ACCOMMODATE CORNER AIRFLOW.



SANYO's semi-concealed ceiling units are flexible and space-saving. A perfect conditioning solution for small spaces. Barely visible, the unit blends with any interior design. Powerful enough to cool and comfort those inside.

07 AHX 52 / 09 AHX 52/ 12 AHX 52

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * One-Way Air Throw – Perfect for Small Spaces
- * Washable Long Life Air Filter
- * Built-In Drain Pump – 24 Inch Lift
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Only 13 Inches Tall (Not Including Decorative Panel), 30 Inches Wide and 25 Inches Deep
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed control
- * Optional Fresh Air Intake
- * Easy Service

SYSTEM/MODEL	Components	(Type: Nominal Cooling Capacity, etc)	Volt	PH
07 AHX 52	System	7500 BTU 1-Way Ceiling cassette (includes grille)	208-230V/60 HZ	1
	AHX 0752	cassette	208-230V/60 HZ	1
	PNR-AH1252	grille		
09 AHX 52	System	9000 BTU 1-Way Ceiling cassette (includes grille)	208-230V/60 HZ	1
	AHX 0952	cassette	208-230V/60 HZ	1
	PNR-AH1252	grille		
12 AHX 52	System	12000 BTU 1-Way Ceiling cassette (includes grille)	208-230V/60 HZ	1
	AHX 1252	cassette	208-230V/60 HZ	1
	PNR-AH1252	grille		

DESCRIPTION	07AHX 52	09 AHX 52	12 AHX 52
PERFORMANCE			
COOLING CAPACITY	7,500 BTU/H	9,600 BTU/H	12,000 BTU/H
HEATING CAPACITY	8,500 BTU/H	11,000 BTU/H	14,000 BTU/H
CURRENT			
COOLING	0.29/0.28 A	0.29/0.28 A	0.32/0.31 A
HEATING	0.28/0.26 A	0.28/0.26 A	0.34/0.32 A
POWER INPUT			
COOLING	48/50 W	48/50 W	52/55 W
HEATING	44/46 W	44/46 W	50/52 W
HEAT EXCHANGER			
FAN TYPE X QUANTITY	SCIRROCO X1	SCIRROCO X1	SCIRROCO X1
FAN AIRFLOW RATE	282/247/212	282/247/212	320/280/250
FAN EXT. STATIC PRESS (230V)	0 IN. WC	0 IN. WC	IN. WC
FAN MOTOR TYPE	DC	DC	DC
FAN MOTOR OUTPUT	60 W	60 W	60 W
REFRIGERANT PIPE DIMENSIONS			
LOW PRESSURE (FLARE)	1/4"	1/4"	1/4"
HIGH PRESSURE (FLARE)	1/2"	1/2"	1/2"
UNIT DIMENSIONS	13"/ 30"/ 24.5"/ 43 LBS.		
Inches (") / lbs.	HEIGHT/ WIDTH/ DEPTH/ NET WEIGHT		
DRAINPIPE DIMENSION	1 1/4" OD		
SOUND LEVELS			
(LOW-MED-HIGH) DB(A) @ 230V	29/31/33		



SANYO's ceiling suspended units are an ideal solution for any medium to light commercial space perfectly. Suited for retail stores, schools and restaurant applications, its wide air opening provides comfortable airflow and ultra quiet operation.

THX 1252 / THX 1852 / THX 2452

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Low Profile Design Fits Into Numerous Ceiling Suspended Locations
- * One Way Air Discharge with Vanes and Auto Louvre for Efficient Air Distribution
- * Washable Long Life Air Filter
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Less Than 9 Inches Tall and Less than 36 Inches Wide (47 Inches Wide For THX2452)
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed control
- * Easy Service

MODELS	(Type: Nominal Cooling Capacity, etc)	Volt	PH
THX 1252	12,000 BTU	208-230V/60 HZ	1
THX 1852	18,000 BTU	208-230V/60 HZ	1
THX 2452	24,000 BTU	208-230V/60 HZ	1

DESCRIPTION	THX 1252	THX 1852	THX 2452
CAPACITY COOLING HEATING	12,000 BTU 14,000 BTU	19,000 BTU 21,000 BTU	25,000 BTU 27,000 BTU
CURRENT COOLING HEATING	0.14/0.17 A 0.14/0.15 A	0.15/0.14 A 0.15/0.17 A	0.34/0.31 A 0.34/0.36 A
POWER INPUT COOLING HEATING	15/16 W 15/16 W	16/16 W 16/18 W	38/37 W 40/40 W
UNIT DIMENSIONS Inches (") / lbs.	8.5" / 36" / 27" / 46 lbs. Height/ Width/ Depth/ Net Weight		8.5" / 46.5" / 27" / 55 lbs. Height/ Width/ Depth/ Net Weight
HEAT EXCHANGER FAN TYPE X QUANTITY FAN AIRFLOW RATE FAN EXT. STATIC PRESS (230V) FAN MOTOR TYPE FAN MOTOR OUTPUT	SCIROCCO X1 450/390/320 - CFM - (H/M/L) 0 - In.WC DC 60 - W	SCIROCCO X1 450/390/320 - CFM - (H/M/L) 0 - In.WC DC 60 - W	SCIROCCO X1 653/530/495 - CFM - (H/M/L) 0 - In.WC DC 60 - W
REFRIGERANT PIPE DIMENSIONS LOW PRESSURE (FLARE) HIGH PRESSURE (FLARE)	1/4" 1/2"	1/4" 1/2"	3/8" 5/8"
DRAINPIPE DIMENSION	1" OD	1" OD	1" OD
SOUND LEVELS (LOW-MED-HIGH)	30/32/35 - DB(A) @ 230V	30/33/36 - DB(A) @ 230V	33/36/38 - DB(A) @ 230V



**FLOOR MOUNTED
WITH DECORATIVE PANEL**

FHX 0762 / FHX 0962 / FHX 1262

FHX 1562 / FHX 1862 / FHX 2462

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed Control
- * Easy Service
- * Washable Long Life filter



**FLOOR MOUNTED
WITH OUT DECORATIVE PANEL**

FMHX 0762 / FMHX 0962 / FMHX 1262

FMHX 1562 / FMHX 1862 / FMHX 2462

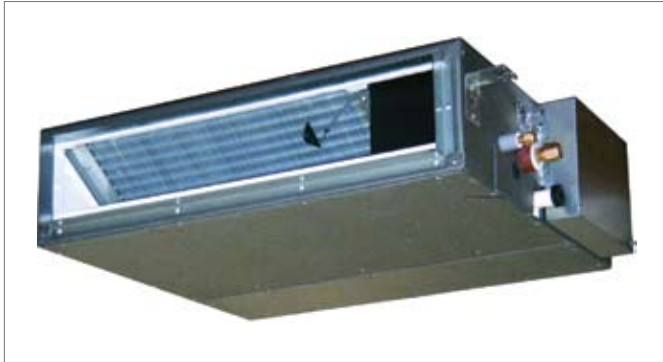
KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed Control
- * Easy Service
- * Washable Long Life filter

DESCRIPTION	FHX/FMHX 0762	FHX/FMHX 0962	FHX/FMHX 1262	FHX/FMHX 1562	FHX/FMHX 1862	FHX/FMHX 2462
CAPACITY COOLING HEATING	7,500 BTU 8,500 BTU	9,600 BTU 11,000 BTU	12,000 BTU 14,000 BTU	15,000 BTU 17,000 BTU	19,000 BTU 21,000, BTU	24,000 BTU 27,000 BTU
CURRENT COOLING HEATING	.22/.24 A .22/.23 A	.22/.24 A .22/.23 A	.42/.44 .40/.42	.58/.60 .53/.55	.58/.60 .53/.55	.61/.63 .56/.58
POWER INPUT COOLING HEATING	45/54 W 43-50 W	45/54 W 43-50 W	86/101 83/96	116/134 106/122	116/134 106/122	119/138 109/125
FHX UNIT DIMENSIONS Inches (") / lbs.	24.25"/42"/9"/64 lbs. Height/Width/Depth/Net Weight	24.2"/42"/9"/64 lbs. Height/Width/Depth/Net Weight	24.2"/42"/9"/64 lbs. Height/Width/Depth/Net Weight	24.0"/54.5"/9"/86 lbs. Height/Width/Depth/Net Weight	24.0"/54.5"/9"/62 lbs. Height/Width/Depth/Net Weight	24.0"/54.5"/9"/62 lbs. Height/Width/Depth/Net Weight
FMHX UNIT DIMENSIONS Inches (") / lbs.	24.25"/35.5"/9"/46 lbs. Height/Width/Depth/Net Weight	24.25"/35.5"/9"/46 lbs. Height/Width/Depth/Net Weight	24.25"/35.5"/9"/46 lbs. Height/Width/Depth/Net Weight	24.25"/48"/9"/62 lbs. Height/Width/Depth/Net Weight	24.25"/48"/9"/62 lbs. Height/Width/Depth/Net Weight	24.25"/48"/9"/62 lbs. Height/Width/Depth/Net Weight
HEAT EXCHANGER FAN TYPE X QUANTITY FAN AIRFLOW RATE FAN MOTOR OUTPUT	Centrifugal 247/212/177 10 W	Centrifugal 247/212/177 10 W	Centrifugal 318/247/212 20 W	Centrifugal 424/318/283 20 W	Centrifugal 530/459/389 30 W	Centrifugal 601/495/424 60 W
REFRIGERANT PIPE DIMENSIONS LOW PRESSURE (FLARE) HIGH PRESSURE (FLARE)	1/4" 1/2"	1/4" 1/2"	1/4" 1/2"	1/4" 1/2"	1/4" 1/2"	3/8" 5/8"
DRAINPIPE DIMENSION	1 1/4" OD	1 1/4" OD	1 1/4" OD	1 1/4" OD	1 1/4" OD	1 1/4" OD
SOUND LEVELS (LOW-MED-HIGH)	28/30/33	28/30/33	29/35/39	31/35/38	31/36/39	35/38/41

Concealed Ducted - Low Profile, Low Static, with Condensate Pump

UMHX SERIES



8 inches high
Low Profile fits into tight ceiling spaces.

UMHX 0762 / UMHX 0962 / UMHX 1262
UMHX 1562 / UMHX 1862

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Adjustable External Static Pressure
- * Built-In Drain Pump – 20 Inch Lift
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed Control
- * Bottom or Rear Return Air
- * Easy Service
- * 8 inches high"
- * Low Profile fits into tight ceiling spaces
- * Optional Fresh Air Intake
- * Washable Long Life Filter

MODELS	(Type: Nominal Cooling Capacity, etc)	Volt	PH
UMHX 0762	7500 BTU ESP = 0.04 / 0.12	208-230V/60 HZ	1
UMHX 0962	9600 BTU ESP = 0.06 / 0.12	208-230V/60 HZ	1
UMHX 1262	12000 BTU ESP = 0.06 / 0.16	208-230V/60 HZ	1
UMHX 1562	15000 BTU ESP = 0.06 / 0.16	208-230V/60 HZ	1
UMHX 1862	19000 BTU ESP = 0.16 / 0.16	208-230V/60 HZ	1

DESCRIPTION	UMHX 0762	UMHX 0962	UMHX 1262	UMHX 1562	UMHX 1862
PERFORMANCE					
COOLING CAPACITY	7,500 BTU/H	9,600 BTU/H	12,000 BTU/H	15,000 BTU/H	19,000 BTU/H
HEATING CAPACITY	8,500 BTU/H	11,000 BTU/H	14,000 BTU/H	17,000 BTU/H	21,000 BTU/H
CURRENT					
COOLING	0.22/0.21 A	0.261/0.25 A	0.28/0.26 A	0.34/0.33 A	0.47/0.43 A
HEATING	0.23/0.22 A	0.28/0.28 A	0.30/0.37 A	0.36/0.35 A	0.51/0.47 A
POWER INPUT					
COOLING	32/30 W	35/37 W	37/39 W	44/46 W	59/61 W
HEATING	32/30 W	37/40 W	39/40 W	47/49 W	63/64 W
HEAT EXCHANGER					
FAN TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
FAN AIRFLOW RATE	212 / 247 / 283	230 / 265 / 300	247 / 283 / 318	283 / 336 / 371	0353 / 406 / 442
FAN EXT. STATIC PRESS (230V)	0.04 / 0.12 IN. WC	0.06 / 0.12 IN. WC	0.06 / 0.16 IN. WC	0.06 / 0.16 IN. WC	0.06 / 0.16 IN. WC
FAN MOTOR TYPE	DC	DC	DC	DC	DC
FAN MOTOR OUTPUT	50 W	50 W	50 W	50 W	50 W
REFRIGERANT PIPE DIMENSIONS					
LOW PRESSURE (FLARE)	1/4"	1/4"	1/4"	1/4"	1/4"
HIGH PRESSURE (FLARE)	1/2"	1/2"	1/2"	1/2"	1/2"
UNIT DIMENSIONS	7 7/8", 29 17/32", 25 13/64", 42 LBS				
Inches (") / lbs.	HEIGHT/ WIDTH/ DEPTH/ NET WEIGHT				
DRAINPIPE DIMENSION	1 1/4" OD				
SOUND LEVELS					
(LOW-MED-HIGH) DB(A) @ 230V	25/27/28	27/29/30	28 / 30 / 32	30 / 32 / 34	31 / 33 / 35



SANYO's concealed ceiling units are compact and space saving. Advanced zoning capabilities. Efficient design. A perfect conditioning solution for shorter duct runs.

UHX 0762 / UHX 0962 / UHX 1262
UHX 1562 / UHX 1862 / UHX 2462
UHX 3662 / UHX 4862 / UHX 5462

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Includes 8" round duct connections (two 8" duct collars for 7-15,000 BTU units three 8" duct collars for 18-24,000 BTU unit and four 8" duct collars for 36-54,000 BTUs units) can be removed for plenum ducting.
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Adjustable External Static Pressure
- * Built-In Drain Pump – 20 Inch Lift
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed Control
- * Bottom or Rear Return Air
- * Easy Service
- * Optional Fresh Air Intake

MODELS	(Type: Nominal Cooling Capacity, etc)	Volt	PH
UHX 0762	7500 BTU 0.28 / 0.40 ESP	208-230V/60 HZ	1
UHX 0962	9600 BTU 0.28 / 0.40 ESP	208-230V/60 HZ	1
UHX 1262	12000 BTU 0.28 / 0.40 ESP	208-230V/60 HZ	1
UHX 1562	15000 BTU 0.28 / 0.44 ESP	208-230V/60 HZ	1
UHX 1862	19000 BTU 0.32 / 0.48 ESP	208-230V/60 HZ	1
UHX 2462	25000 BTU 0.32 / 0.48 ESP	208-230V/60 HZ	1
UHX 3662	36000 BTU 0.32 / 0.49 ESP	208-230V/60 HZ	1
UHX 4862	48000 BTU 0.31 / 0.45 ESP	208-230V/60 HZ	1
UHX 5462	54600 BTU 0.31 / 0.45 ESP	208-230V/60 HZ	1

DESCRIPTION	UHX 0762	UHX 0962	UHX 1262	UHX 1562	UHX 1862	UHX 2462	UHX 3662	UHX 4862	UHX 5462
PERFORMANCE									
COOLING CAPACITY	7,500 BTU/H	9,600 BTU/H	12,000 BTU/H	15,000 BTU/H	19,000 BTU/H	25,000 BTU/H	36,000 BTU/H	47,800 BTU/H	54,600 BTU/H
HEATING CAPACITY	8,500 BTU/H	11,000 BTU/H	14,000 BTU/H	17,000 BTU/H	21,000 BTU/H	27,000 BTU/H	39,000 BTU/H	54,600 BTU/H	61,400 BTU/H
CURRENT									
COOLING	0.45/0.49 A	0.45/0.49 A	0.52/0.55 A	0.52/0.55 A	0.90/0.96 A	0.90/0.96 A	1.15/1.25 A	1.25/1.34 A	1.25/1.34 A
HEATING	0.42/0.46 A	0.42/0.46 A	0.49/0.54 A	0.49/0.54 A	0.89/0.95 A	0.89/0.95 A	1.10/1.18 A	1.13/1.20 A	1.13/1.20 A
POWER INPUT									
COOLING	92/112 W	92/112 W	107/125 W	107/125 W	183/219 W	183/219 W	235/282 W	254/301 W	254/301 W
HEATING	87/104 W	87/104 W	100/122 W	100/122 W	182/214 W	182/214 W	224/267 W	230/271 W	230/271 W
HEAT EXCHANGER									
FAN TYPE	CENTRIFUGAL X1	CENTRIFUGAL X1	CENTRIFUGAL X1	CENTRIFUGAL X1	CENTRIFUGAL X1	CENTRIFUGAL X1	CENTRIFUGAL X1	CENTRIFUGAL X1	CENTRIFUGAL X1
HI/MED/LOW FAN AIRFLOW RATE	353/300/247	353/300/247	424/371/318	424/371/318	671/565/459	671/565/459	1060/919/742	1116/1060/883	1166/1060/883
FAN EXT. STATIC PRESS (230V)	0.40 IN. WC	0.40 IN. WC	0.40 IN. WC	0.44 IN. WC	0.48 IN. WC	0.48 IN. WC	0.49 IN. WC	0.45 IN. WC	0.45 IN. WC
FAN MOTOR TYPE	AC	AC	AC	AC	AC	AC	AC	AC	AC
FAN MOTOR OUTPUT	50 W	50 W	70 W	70 W	100 W	100 W	140 W	140 W	140 W
REFRIGERANT PIPE DIMENSIONS									
LOW PRESSURE (FLARE)	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"
HIGH PRESSURE (FLARE)	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"
UNIT DIMENSIONS									
Inches (") / lbs.	12.5' / 27.5' / 25' / 53 LBS. HEIGHT / WIDTH / DEPTH / NET WEIGHT			12.5' / 39.5' / 25' / 71 LBS. HEIGHT / WIDTH / DEPTH / NET WEIGHT			12.5' / 58.5' / 25' / 104 LBS. HEIGHT / WIDTH / DEPTH / NET WEIGHT		12.5' / 58.5' / 25' / 104 LBS. HEIGHT / WIDTH / DEPTH / NET WEIGHT
DRAINPIPE DIMENSION	1 1/4" OD								
SOUND LEVELS									
(LOW-MED-HIGH) DB(A) @ 230V	24/28/31	24/28/31	24/28/31	26/30/33	27/32/36	27/32/36	31/33/38	33/37/40	33/37/40



SANYO's concealed ceiling units are flexible and space saving, helping maximize floor and wall space. Advanced zoning capabilities condition large areas simply and efficiently. Completely concealed, they offer simple installation.

DHX 3652 / DHX 4852

KEY FEATURES:

- * "ECO Friendly" R410A Refrigerant
- * 208/230V, 1 Phase, 60Hz
- * Electronic Expansion Valve (EEV) for Accurate Refrigerant Control
- * Perfect for Long Duct Runs
- * Wired or Wireless Remote Control
- * Automatic or Fixed Fan Speed Control
- * Easy Service
- * Built-in float safety

A PERFECT APPLICATION FOR LONGER DUCT RUN INSTALLATIONS.

MODELS	(Type: Nominal Cooling Capacity, etc)	Volt	PH
DHX 3652	36,000 BTU ESP = 0.70"	208-230V/60 HZ	1
DHX 4852	48,000 BTU ESP = 0.67"	208-230V/60 HZ	1

DESCRIPTION	DHX 3652	DHX 4852
CAPACITY COOLING HEATING	36,000 BTU 39,000 BTU	47,800 BTU 54,600 BTU
CURRENT COOLING HEATING	2.84/2.89 A 2.74/2.80 A	3.24/3.19 A 3.17/3.42 A
POWER INPUT COOLING HEATING	548/620 W 528/602 W	644/695 W 627/756 W
UNIT DIMENSIONS Inches (") / lbs.	16.5" / 42" / 24.5" / 110 lbs. Height/ Width/ Depth/ Net Weight	18" / 42" / 24.5" / 119 lbs. Height/ Width/ Depth/ Net Weight
HEAT EXCHANGER FAN TYPE X QUANTITY FAN AIRFLOW RATE FAN EXT. STATIC PRESS (230V) FAN MOTOR TYPE FAN MOTOR OUTPUT	CENTRIFUGAL X1 1,060/988/883 - CFM - (H/M/L) 0.70 - In.WC AC 200 - W	CENTRIFUGAL X1 1,272/1,237/1,160 - CFM - (H/M/L) 0.67 - In.WC AC 400 - W
REFRIGERANT PIPE DIMENSIONS LOW PRESSURE (FLARE) HIGH PRESSURE (FLARE)	3/8" 5/8"	3/8" 5/8"
DRAINPIPE DIMENSION	1 1/4" OD	1 1/4" OD
SOUND LEVELS (LOW-MED-HIGH)	42/44/45 - DB(A) @ 230V	44/46/47 - DB(A) @ 230V

CONTROL SYSTEMS

Simple System Control Network S-Net

SANYO's system control network is the heart and soul of the ECOi™ unit, enabling it to live with the living inside. With a simple two-wire loop installation, we put control in your hands, literally. No outside specialists required, it's an all-in-one solution for you, and a way to further build profits by keeping installation in-house. The logic resides in the ECOi system and the control is the gateway.

RCS-TM80BG / RCS-BH80AAB.WL / RCS-SH80AAB.WL
RCS-TRP80AAB.WL / RCS-XM18AAB.WL
RCS-SH1AAB.WL / RCS-KR1EG / SHA-KC64UG
SHA-TM64AGB / SHA-KT256EA / SHA-KA128AAB
ART-K45AGB / SHA-LN16UBA / BMS-CTRL1
TECS-5000KA / TECS-5000AA / TECS-5000GA
TECS-5000BA / TECS-5000WA

NO OUTSIDE SPECIALISTS REQUIRED,
IT'S AN ALL-IN-ONE SOLUTION FOR YOU.

PART NUMBER	DESCRIPTION	NOTES
RCS-TM80BG	WIRED REMOTE CONTROLLER — 7- day setback, mode, temp, service, etc.	
RCS-BH80AAB.WL	WIRELESS REMOTE CONTROLLER — For use with UHX, UMHX, DHX, FHX and FMHX models	
RCS-SH80AAB.WL	WIRELESS REMOTE CONTROLLER — For use with XHX models	
RCS-TRP80AAB.WL	WIRELESS REMOTE CONTROLLER — For use with AHX and THX models	
RCS-XM18AAB.WL	WIRELESS REMOTE CONTROLLER — For use with XMHX models	
RCS-SH1AAB	WIRELESS REMOTE CONTROLLER — For use with KHX models	
RCS-KR1EG	SIMPLE REMOTE CONTROLLER (wired) — on/off, Mode, Temp, Fan Speed, Flap, Service Function	
SHA-KC64UG	SYSTEM CONTROLLER — Set individual indoor unit temps for up to 4 zones, 16 indoor units max per zone	
SHA-TM64AGB	SCHEDULE TIMER — Thermal On/Off at program times only, no set back temperature	
SHA-KT256EA	INTELLIGENT CONTROLLER (Web Enabled) — Controls Max of 256 indoor units with SHA-KA128AAB	
SHA-KA128AAB	COMMUNICATIONS ADAPTOR — Used with INTELLIGENT CONTROLLER and BMS interface	
ART-K45AGB	REMOTE SENSOR	
SHA-LN16UBA	LONWORKS INTERFACE — Maximum of 16 indoor units	
BMS-CTRL1	BMS INTERFACE — BACnet, LONworks, N2 or MODBUS (also requires SHA-KA128AAB)	
TECS-5000KA	STAIMS — Base Software Package	
TECS-5000AA	STAIMS — Electrical Power Distribution Proportioning Software (also requires TECS-5000KA)	
TECS-5000GA	STAIMS — Layout Graphic Display Software (also requires TECS-5000KA)	
TECS-5000BA	STAIMS — BACnet Interface Software (also requires TECS-5000KA)	
TECS-5000WA	STAIMS — Web Enabling Software (also requires TECS-5000KA)	



RCS-SH80AAB.WL
For Use With XHX Indoor Units



RCS-SH1AAB
For Use With KHX Indoor Units



RCS-TRP80AAB.WL
For Use With AHX and THX Indoor Units



RCS-BH80AAB.WL
For Use With UHX, UMHX,
DHX, FHX and FMHX Indoor Units

SANYO's wireless remotes control more than comfort.

WIRELESS REMOTES

CONTROL IN THE PALM OF YOUR HAND.

They enable the user to truly take control of the entire system, from mode, temperature, airflow, and system diagnosis, all through an easy-to-read liquid crystal display. Control at your fingertips.

KEY FEATURES:

- * Thin and Easy To Read
- * Simple To Install and Use
- * Can Be Adapted for Use On All ECOi Indoor Units
- * Fan Speed Control
- * Timer Mode Start/Stop
- * Timer Mode On/Off
- * Operating Mode
- * Inspection/Test Indication
- * Remote Can Be Configured To Sense Temperature

WIRED REMOTES

SIMPLE TO INSTALL

Simple remotes offer control where minimal functionality is best suited for those inside. SANYO's Standard Remote with 7 Day Timer is perfectly suited for those requiring more programmed management over multiple zones. By offering immediate diagnostics and up to six-daily set temperature schedules, it's a perfectly controlled solution offering intuitive simplicity.



RCS-KR1EG
Simple Remote Controller



RCS-TM80BG
Standard Remote/7 Day Timer
For Use With All Indoor Units

SANYO's wired remote controls offer multiple conditioning solutions to meet the needs of any project.

KEY FEATURES (STANDARD REMOTE/7 DAY TIMER):

- * Thin and Easy To Read
- * Simple To Install and Use
- * Can Be Adapted for Use On All ECOi Indoor Units
- * Fan Speed Control: Including Automatic or Fixed
- * Airflow Direction
- * Operating Mode (Heating/Cooling/Auto/Dry/Fan)
- * Vacation Mode for Continued Energy Efficiencies
- * Full 7 Day Set-Back Functionality, With Up To 6 Time Periods/Day
- * Full System Diagnostic Capability (Diagnostic History Provides Immediate View of System Past and Present.)

KEY FEATURES: (SIMPLE REMOTE)

- * Thin and Easy To Read
- * Simple To Install and Use
- * Can Be Adapted for Use On All ECOi Indoor Units
- * Mode
- * Operating Mode (Heating/Cooling/Auto/Dry/Fan)
- * Vacation Mode for Continued Energy Efficiencies
- * Fan Speed Control: Including Automatic or Fixed
- * Set Temperature
- * On/Off
- * Airflow Direction
- * Perfectly Suited for Applications Where Simpler Functionality is Required (ie: Hotel Rooms, Nursing Homes, Offices)



SHA-KC64UG
System Controller

Controls Up To 64 Units Into 4 Individualized Zones

MULTIPLE ZONE CONTROLLERS THE HEART AND SOUL OF CONDITIONING.

KEY FEATURES (SYSTEM CONTROL):

- * Controls Up To 64 Units Into 4 Individualized Zones
- * Alarm and Operational Signal Output
- * Single Access Points for All Connected Wired Remotes

SANYO's system and intelligent controls are the central nervous system to the conditioning system. The gateway to all data, temperature and system diagnostics.



SHA-KT256BA
Intelligent Controller

Web Accessible/Real Time Diagnostics Through Individual IP Address

CONTROLS UP TO 256 INDOOR UNITS

KEY FEATURES (INTELLIGENT CONTROL):

- * 6.5 Inch Touch Screen Panel
- * Controls up to 256 Indoor units with added Communication Adapter (128 indoors without)
- * New Control Wiring System (S Net) Connects Up To 64 Units To a Single Control Line
- * Offers a Maximum Installation of Two System Controls (One Main, One Sub)
- * Provides Individual Tenant Billing data for 3 systems addition systems are done by adding Communication Adapters. Requires watt hour meters
- * Provides Individual Tenant Billing Data Through Calculations Based on a Per-Tenant Basis
- * Individual Zone Override Feature (High/Low Setting)
- * Web Accessible/Real Time Diagnostics Through Individual IP Address
- * Diagnostic History of System Past and Present



SHA-LN16UAB
LonWorks Interface

SANYO's LonWorks interface integrates into many compatible Building Management Systems. Single point of control. Access to all of the ECOi™ conditioning mechanics.

LONWORKS INTERFACE
SINGLE POINT OF CONTROL

KEY FEATURES:

- * Communicate With LonWorks Compatible Systems
- * Start/Stop
- * Controls Up To 16 Groups (Maximum 64 Indoor Units)
- * For 17 or more groups of indoor units connect additional interface units.
- * Temperature Setting, Fan Speed, etc.
- * Schedule Time Setting
- * Alarm Notification



BMS-CTRL1
BacNet Interface

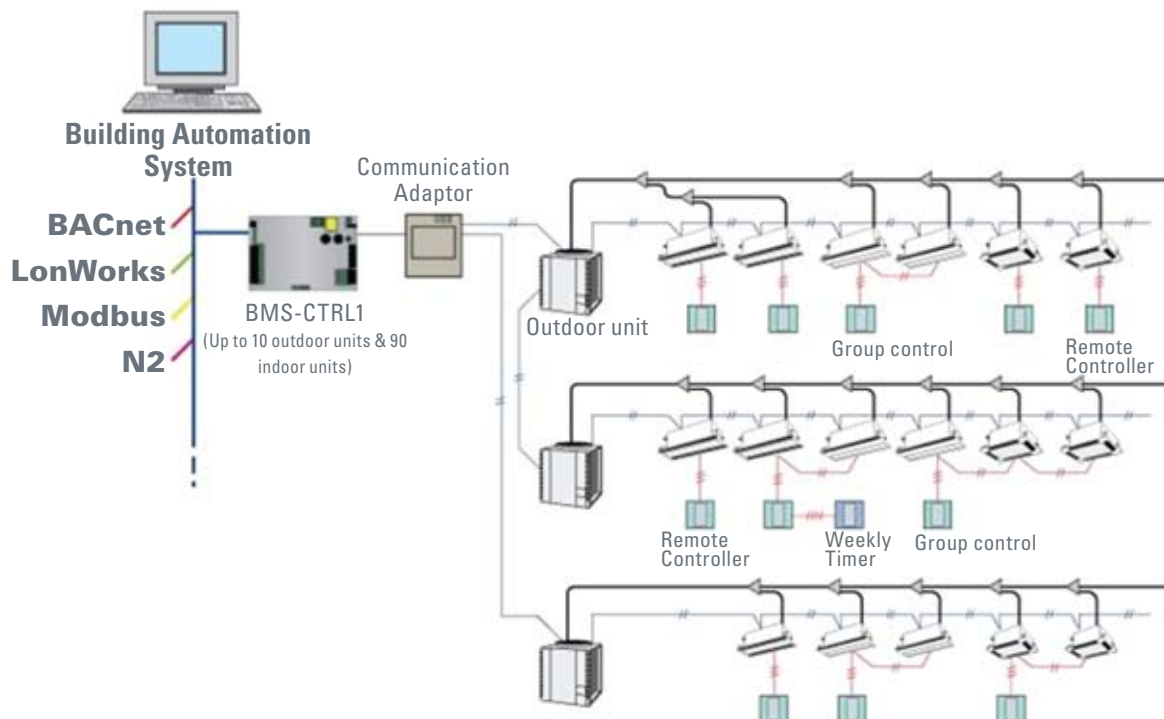
SANYO's BMS Controller sets a new standard for multiple equipment protocol conversion.

BMS CONTROLLER
BMS-CTRL1

KEY FEATURES:

- * Able to provide BMS integration to a variety of BMS protocols including BACnet, Modbus LonWorks and N2
- * Communicates with up to 90 indoor units and 10 outdoor units (note; N2 can communicate with 40 indoor and 10 outdoor units)
- * Provides control of operating mode, fan, set temperature
- * Provides status of operating modes and alarm status

NETWORK DIAGRAM



ACCESSORIES

Simple System Control Network

PART NUMBER	DESCRIPTION	2-Way Distribution Kits (cut to fit)
APR-P160UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used with 2 Pipe indoor Unit Piping - Up to 76,400 BTUs
APR-P680UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used with 2 Pipe indoor Unit Piping - 76,500 to 232,000 BTUs
APR-P1350UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used with 2 Pipe indoor Unit Piping - 232,200 to 460,700 BTUs
APR-CHP680UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used to Connect Multiple 2 Pipe Outdoor Units - Up to 232,000 BTUs
APR-CHP1350UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used to Connect Multiple 2 Pipe Outdoor Units - 232,200 to 460,700 BTUs

3-Way Distribution Kits (cut to fit)		
APR-RZP224UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used with 3 Pipe Indoor Unit Piping - Up to 76,400 BTUs
APR-RZP680UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used with 3 Pipe Indoor Unit Piping - 76,500 to 232,000 BTUs
APR-RZP1350UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used with 3 Pipe Indoor Unit Piping - 232,200 to 460,700 BTUs
APR-CHRZP900UK	DISTRIBUTION JOINT KIT CUT TO FIT	Used to Connect Multiple 3 Pipe Outdoor Units - Up to 307,100 BTUs

3-Way Solenoid Valve Kits		
ATK-RZP56BAWB	SOLENOID VALVE KIT	Total Indoor Capacity of Less than 19,000 BTUs (for 3 Pipe System)
ATK-RZP160BAWB	SOLENOID VALVE KIT	Total Indoor Capacity of 19,100 to 54,600 BTUs (for 3 Pipe System)

Ball Valves		
BVT 14	1/4" Ball Valve	With Access Port Fitting
BVT 38	3/8" Ball Valve	With Access Port Fitting
BVT 12	1/2" Ball Valve	With Access Port Fitting
BVT 58	5/8" Ball Valve	With Access Port Fitting
BVT 34	3/4" Ball Valve	With Access Port Fitting
BVT 78	7/8" Ball Valve	With Access Port Fitting
BVT 118	1-1/8" Ball Valve	With Access Port Fitting
BVT 138	1-3/8" Ball Valve	With Access Port Fitting
BVT 158	1-5/8" Ball Valve	With Access Port Fitting

Mini Condensate Pumps		
ASP-MA115	115 VOLT MINI AQUA ASPEN CONDENSATE PUMP	Max 26' Lift, 3.7 GPH @ 0 Lift, 0.8 GPH @ 26'
ASP-MA230	230 VOLT MINI AQUA ASPEN CONDENSATE PUMP	Max 26' Lift, 3.7 GPH @ 0 Lift, 0.8 GPH @ 26'
ASP-ML115	115 VOLT MINI LIME ASPEN CONDENSATE PUMP	Max 26' Lift, 3.7 GPH @ 0 Lift, 0.8 GPH @ 26'
ASP-ML230	230 VOLT MINI LIME ASPEN CONDENSATE PUMP	Max 26' Lift, 3.7 GPH @ 0 Lift, 0.8 GPH @ 26'
ASP-MO115	115 VOLT MINI ORANGE ASPEN PUMP	Max 26' Lift, 3.7 GPH @ 0 Lift, 0.8 GPH @ 26'
ASP-MO230	230 VOLT MINI ORANGE ASPEN PUMP	Max 26' Lift, 3.7 GPH @ 0 Lift, 0.8 GPH @ 26'

CMB-FS140AA	FRESH AIR CHAMBER	For Use With XHX2452 and XHX3652 Indoor Units Only (Requires CMB-GS140AA)
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460 Transformers		
ACC-195674	460V TO 230V, 11 KVA TRANSFORMER	For Use With CHDX07263, or CHDZ07263, One Per Outdoor Unit
ACC-195679	460V TO 230V, 14 KVA TRANSFORMER	For Use With CHDX09663, or CHDZ09663, One Per Outdoor Unit

ACC-CR-USB	Pac Checker Service & diagnostics tool for all ECOi and SANYO Splits greater than 26,000 BTUs
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PART NUMBER	DESCRIPTION
ECO-SC-4	ECOi COMMISSIONING (Per normal business day, up to 24 tons)
IC-SC-1	COMMISSIONING OF INTELLIGENT CONTROLLER (Base fee for each Intelligent Controller)
IC-SC-INDOOR	COMMISSIONING OF INTELLIGENT CONTROLLER (Indoor Units)
LW-SC-1	COMMISSIONING OF LONWORKS INTERFACE MODULE (Base fee)
LW-SC-INDOOR	COMMISSIONING OF LONWORKS INTERFACE (Indoor Units fee)
PP-SC-1	COMMISSIONING OF INTELLIGENT BACnet INTERFACE (Base fee for each BMS-CTRL 1)
PP-SC-INDOOR	COMMISSIONING OF INTELLIGENT BACnet (Indoor Units fee)
CA-SC-1	COMMISSIONING OF COMMUNICATIONS ADAPTER (Base fee for each Comm. Adapter)
CA-SC-INDOOR	COMMISSIONING OF COMMUNICATIONS ADAPTER (Indoor Units fee)
STAIMS-SC-1	
	COMMISSIONING OF STAIMS MANAGEMENT SYSTEM (Base fee for each overall system)
STAIMS-SC-INDOOR	COMMISSIONING OF STAIMS MANAGEMENT SYSTEM (Indoor Units fee)
AC-SC-1	PROGRAM 2-WAY SYSTEM TO ENABLE AUTO CHANGEOVER OF MODE (Base fee /Indoor Units fee)
AC-SC-INDOOR	PROGRAM 2-WAY SYSTEM TO ENABLE AUTO CHANGEOVER OF MODE (Indoor Units fee)
IPO-SC-1	PROGRAM "IGNORE INDOOR POWER OFF FAILURE" FOR 2-WAY SYSTEM (Base fee /Indoor Units fee)
IPO-SC-INDOOR	PROGRAM "IGNORE INDOOR POWER OFF FAILURE" FOR 2-WAY SYSTEM (Indoor Units fee)
CNBH	COMMISSIONING COMPLETED DURING NON-BUSINESS HOURS OR NON-BUSINESS DAYS
COUS	ALL COMMISSIONING OF SYSTEMS OR COMPONENTS OUTSIDE CONTINENTAL U.S.
RP-SIT-1	
	TRAINING - MINI SPLIT SYSTEMS (1 class per day at Customer Location)
RP-SIT-2	
	TRAINING - MINI SPLIT SYSTEMS (2 classes / same location / same day)
ECOi-IST	
	TRAINING - ECOi INSTALLATION AND COMMISSIONING TRAINING (at customer location)
ECOi-SERT	
	TRAINING - ECOi SERVICE TRAINING (at customer location)
TOUS	
	TRAINING (Conducted outside of the Continental U.S.)
ECO-SIT-4	
	TRAINING (On-Site Supervised ECOi installation training)
ECO-SIT-NR	
	TRAINING (Supervised installation On-Site training where attendee's did not show up agreed upon)
ECO-SIT-OS	
	TRAINING (Supervised installation Training Outside Continental U.S.)

WARRANTY	6 Year Compressor
	1 Year Parts

Safety Precautions

Usage

- The air conditioners listed herein are only for cooling/heating areas used by people. Do not use the unit for foods, animals, plants, precision machines, works of art or other objects. Doing so may cause damage to the unit. Do not use the unit for vehicles or vessels. Doing so may cause unit water leakage and short circuiting.
- Please read the Operating Instructions carefully and use the air conditioner properly.
- Requires a qualified technician/installer to install the air conditioner. Improper self-installation may result in water leakage, electric shock or fire.
- When installing in a small room, take measures to keep refrigerant leakage within acceptable density limits, as outlined by local/national safety code requirements.
- Do not install where inflammable gas may leak or inflammable objects exist. Do not install where there is any inflammable gas emission, inflow or leftover, or where carbon fibers are in the air. This could be the cause of fire.

Caution On Installation and Use

Location

Blocking air intake or outlet can be the cause of trouble including the loss of air flow power, or short-cycled air emission drawn into the intake. Be sure to install in an airy place.

Avoid Installation in Highly Humid Locations

- (1) Avoid installation where the humidity is excessive. This causes condensation during cooling.
- (2) Installation in a room where the temperature and humidity are high around the ceiling due to sunlight will result in condensation. Use insulation or take other preventive measures to block the sunlight.

Exposure to Oil

Avoid installation where there is exposure to oil or soot (such as in kitchens or machinery plants). Oil will adhere to the heat exchange. This will lower heat exchange performance, emit mist, or deform or damage synthetic resin parts.

Cleaning

After using the air conditioner for several seasons, the insides become dirty and this results in low performance. In addition to regular cleaning, a maintenance contract with a service person is recommended.

Features of Heat Pump Heating

Heating power (kW) indicated in the catalog is based on the following conditions: outdoor temperature of 47°F (DB) and indoor temperature of 70°F (DB), as specified by ARI. Heating capacity decreases as outdoor temperature drops. Therefore, if heating power is insufficient due to low outdoor temperature, use the air conditioner together with other heating equipment. When heated air rises and collects in a room with a high ceiling, install an air circulator as well.

Operation Range

Outdoor Air Intake Temperature:
Cooling: 14 ~ 113°F (DB) Heating: - 4 ~ 59°F (WB)

Noise Emissions

The noise emission rate indicated in the catalog shows values (A scale) measured in an anechoic chamber. In actual installation conditions, noise emission is generally greater than the indicated rate due to surrounding noise and echoing.

Odor Emissions

Even though an air conditioner does not contain odor-emitting parts, discharged air can, in certain conditions, have an unpleasant odor. This is the result of odorous particles such as ones from smoke, cosmetics, and foods, affixing themselves to the air conditioner. Although the odor does not affect the performance, cleaning the air filter and the inside of the air conditioner is recommended.

Noise Caused by Electromagnetic Waves

When installing near equipment that emits electromagnetic waves, be sure that the air conditioner does not suffer noise damage.

Remote Control Wiring

For remote control wiring and control wiring between indoor units, do not install with the power wiring (208/230V) in the same tube nor wherever power wiring exists. Doing so may cause a malfunction

ISO Certification
SANYO Electric Air Conditioning Co., Ltd. (Tochigi Japan)



ISO 9001
Certificate Number: JQ116B

ISO 14001
Certificate Number: EC00J0303-33

Do not install an air conditioner in a room where the limit density will be exceeded if refrigerant leaks. The refrigerant (R410A) used by this system is itself a safe refrigerant; however, if for some reason the refrigerant leaks and the limit density is exceeded, there is a risk of injury to persons due to a lack of oxygen. For further information, ask your dealer or consult references such as an engineering manual to ensure you install the air conditioner correctly.

Dealer Network Courses: <http://us.sanyo.com/hvac/Dealer-Certification>

ECOi Web Based Dealer Training Video: <http://us.sanyo.com/hvac/On-Demand-Videos>

- Includes ECOi Installation & Commissioning procedures and much more.

For further information and training or to request additional product catalogs, please contact:

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