

# YOUR MODERN GREEN IDEAS



YMGI is dedicated to designing, manufacturing and distributing the highest quality, energy saving and environmentally friendly air conditioner and heat pump products, while providing the best service and support to all of our customers. Our mission is to help build a sustainable, efficient and green world.

#### YMGI Symphony-Ductless Heat Pump & Heat Recovery:

- **Symphony SOLAR DC Inverter**  
(55) Multiple PV, (56) Single PV; (78) Multiple PH; (79) Single PH
- **Symphony SOLO DC Inverter**  
(57)2,3-Single Zone 16 SEER, 09-24K Btu/h  
(58)2-Single Zone 16-22 SEER, 09-36K Btu/h
- **Symphony CHOIR DC Inverter**  
(59)2--DC Inverter Multiple Zone 16 SEER, 2x09K to 5x12K Btu/h  
(59)2S--DC Inverter Multiple Zone 16SEER 6x09K to 9x12K Btu/h
- **Symphony VRF--DC Inverter HP or Heat Recovery up to 64, 128 Zones.**
- **Symphony CLASSIC--13 & 14 SEER Single & Multiple Zones**
- **Symphony HARMONY--Packaged Self-Contained**  
42x16" PTAC/PTHP, 26 & 24" TTW, and 37x24" WMMP
- **Symphony CONDUCTOR--Split Type Condensing Units**  
Side Discharge SHCR & Through-the-Wall TTWC

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## SYMPHONY SERIES-DC Inverter Ductless Mini Split

Single Zone - SOLAR (56), SOLO (57) and (58)

Multiple Zones - CHOIR (59) 2 1-5 and 6-9



# WELCOME



## Welcome to the Symphony SOLAR, SOLO (Single Zone) and CHOIR (Multiple Zone) DC Inverter Mini Split Systems!

### Where Comfort and Performance Live in Perfect Harmony.

At YMGi, we're all about comfort and performance. Just as great orchestras work in harmony to create a perfect performance, so do YMGi products and the service we provide to our customers. As a leading manufacturer of green technologies, YMGi strives to make products that bring harmony to our customers' environments... heating and cooling comfort, quiet, clean, healthy air (both inside and out), energy savings and peace of mind.

### Efficient, Reliable and Stylish

YMGi products quickly and quietly cool and heat your home in the most efficient way possible. Both the indoor unit and outdoor unit designs have a contemporary style, with a sleek shape and aesthetically pleasing color. Most importantly, they are engineered and built with quality parts that promise reliability and longevity. YMGi stands behind our products and will work tirelessly to make sure you are completely satisfied.

### Meet the Symphony Conductor

YMGi is a world leader in the design, manufacture and sale of air conditioning and heat pump units for use in residential, light commercial, institutional, hospitality, industrial and other applications. Our HVAC & Refrigeration products offer the best value available and are friendly to the environment, installers and end users.

### A Talented Ensemble Working in Perfect Harmony

Our R&D team consists of highly experienced professionals. Our Lab team offers non-stop support for R&D and quality assurance. Our Quality Control and Quality Assurance teams tightly control all processes, including design, parts, equipment assembly, inspection and shipping.

## Discover Maximum Comfort.

"We love YMGi ductless DC Inverter units, because they are a smart, clean, efficient and affordable heating and cooling solution for almost any job large and small."

—HVAC CONTRACTOR  
SAN ANTONIO, TEXAS



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### Meet the Symphony Performers

The YMGi Symphony-DC Inverter Series includes the SOLO single zone mini split systems and the CHOIR multiple zone mini split systems. The SOLO consists of one indoor unit and one outdoor unit. It is the perfect system to heat and cool smaller single zone spaces like sunrooms, nurseries, apartments, condos, offices and mobile homes.

The CHOIR consists of multiple indoor units and one condensing unit. It is the perfect system to heat and cool larger spaces where multiple zone mini split systems can be a good fit, like retail stores, gyms, libraries, hotels, homes, galleries and restaurants.

Both these YMGi Symphony DC Inverter systems utilize the latest inverter technology. They deliver just the right amount of cool or warm air, in a much more efficient way than conventional central air units that have been popularly installed in the past.

So, relax and enjoy the Symphony - SOLO and CHOIR - DC Inverter Series single zone and multiple zone systems.



# MINI SPLIT

## A Smart Heating And Cooling Solution

YMGi Symphony DC Inverter mini split ductless air conditioning and heat pump systems are designed to cool or heat quickly, quietly and efficiently. They are a great solution for both new projects and retrofit or remodeling jobs. Mini-splits are ideal for room additions and newly enclosed spaces (sunrooms, enclosures, garages, porches, decks) that can not be connected to the main central air conditioning system, or where extending or installing regular ductwork would be time consuming, costly, or even impossible. Mini split systems are the easiest and simplest cooling solution for additions to existing homes that have been installed with non-ducted heating systems, like hot water heat, radiant heat or space heaters.

## How Mini Split Systems Work: The Differences between Central Air and Mini Split Systems

If you are familiar with a central air system, you have already had a basic idea of what a split system is. It consists of an outdoor condensing unit and an indoor evaporator unit.

The basic difference between a mini split and central system is that the evaporator unit of the central system is typically found in the basement or attic and that it uses metal or fiberglass ductwork to deliver the warm or cool air to the different rooms in your house. The mini split system is totally ductless. The indoor unit is mounted right in the room you want to cool or heat, and no ductwork is needed.

A central system requires space inside the walls between the joists for the ductwork, plus floor/wall/ceiling space to install the registers. These systems are often noisy and the ductwork is a haven for dust, germs, molds, bacteria, and bugs.

Mini split systems are totally ductless. The outdoor and indoor units are connected with small refrigerant copper pipes and wires being wrapped tight and securely through a small 3" opening in the wall. This makes installation fast, easy and discreet. There is no need to cut into walls to install ductwork, leaving the building structure and décor intact.

The mini split's compressor in the outdoor condensing unit pumps refrigerant through the condensing coils and metering device to the indoor unit where a quiet fan blows across its aluminum coil to cool the room in summer. Even more remarkable is that this same unit, in heat pump mode, works in reverse in winter. It absorbs heat from the outside air and moves it indoors to heat the room. For most climates, this results in efficient, cooling and heating comfort all year long.



### Maximum Comfort, Minimum Cost

A conventional forced air cooling or heating system uses an "on and off" cycle and is a very inefficient. This also reduces the life span of the compressor and other components. Once a conventional system is running, it runs at its maximum speed, consuming the maximum amount of energy in order to reach the desired temperature. The system then has to cycle between on and off, in an effort to maintain the desired temperature.

A Symphony Series Mini Split DC Inverter system starts slowly and smoothly, and then it climbs up to higher speeds to bring the room to the desired temperature rapidly. Once the set temperature is reached, it slows down and adjusts itself to counter the heat gain or loss of the building, maintaining a consistent temperature, delivering maximum comfort at minimum cost.

### Easy to Operate and Easy To Live With

YMGi mini split units have a contemporary styling that will complement your décor indoors and out. The indoor units feature low noise levels, horizontal or vertical air directional louvers to evenly spread air around a room. Wireless remote controls allows you to select the operating thermal mode, fan speed, along with the operation and oscillation of the air louvers. The remote control also allows you to program when the unit will need to turn on and off. The outdoor units feature low noise levels, horizontal venting and stylish looks.

### Products Perfect for Any Decor

YMGi' SOLO and CHOIR systems offer a wide range of indoor wall-mounted, ceiling/floor and ceiling flush-mounted units to cool or heat your rooms. The attractive, flat design of the wall-mounted units complement any décor and the flush-mounted ceiling units are barely noticeable when installed into a suspended ceiling system normally found in offices, stores, bars, and gyms..

# BENEFITS

## Models & Features to Meet Any Need

YMGi offers the widest selection of DC Inverter mini split systems on the market: SOLO single zone units from 9,000 BTUs up to 36,000 BTUs and CHOIR multi-zone units from 2x9,000 Btu/h to 5x12,000 Btu/h, up to 9x12,000 Btu/h 9-ton. Plus, all YMGi DC Inverter mini split units use energy efficient rotary compressors built by the most reliable names in the industry, including Mitsubishi, Sanyo, Toshiba, Hitachi, Panasonic/Matsushita, LD and more.

## Cover Up to Nine Zones

The CHOIR system is the perfect solution for zoning multiple rooms. Currently, YMGi CHOIR DC Inverter Mini-Split System can cover up to nine indoor handling units from just one outdoor unit. The CHOIR's various indoor unit selections of sizes and styles, and great zoning flexibility make it perfect choice for offices, apartments, light commercial, hospitality and institutional applications.

## Reduce Greenhouse Gas Emissions

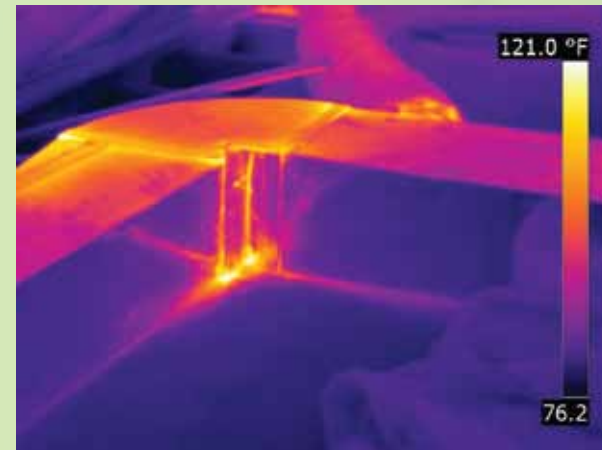
When you install a YMGi Symphony Series system, you are reducing the impact of green house gas emissions and global warming. That's because you are using some of the most energy efficient products in the industry. Every function within the Symphony Series DC Inverter mini split system, from the ductless design, zoning capabilities, DC Inverter technology, all the way through to our exclusive U-TOUCH remote control, is designed to reduce energy consumption, which, also saves you money on energy costs and protects the environment by reducing energy consumption.

## Eco-friendly Refrigerant

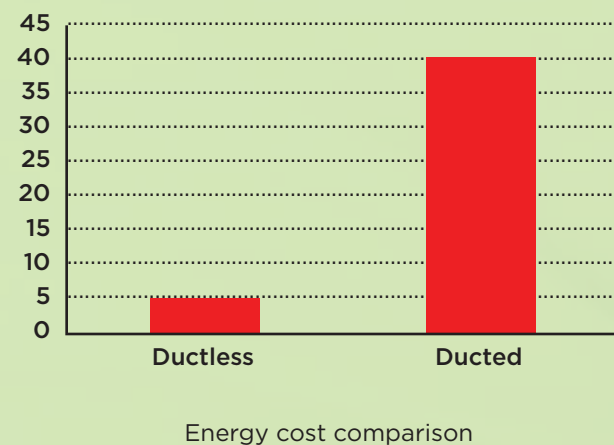
YMGi's green mission doesn't end with energy efficiency. Symphony Series systems use eco-friendly R-410A refrigerant, which helps protect the ozone.

## Save Money & The Environment

As much as 75% of the energy used in your home goes toward heating and cooling. In conventional central air systems, over 30% of the heat created escapes from the ducts before it ever enters a room. YMGi mini split systems have no ductwork, so no energy is wasted.



More savings are realized with our zoned systems. Because each zone or room is controlled separately, you only need to cool or heat a room when it is in use. With energy efficiency rating up to 32 SEER, YMGi DC Inverter systems not only make your room more comfortable, they also make your electric bills more affordable



## Breathe Healthier

Another important benefit of YMGi mini split ductless systems is providing cleaner air to breathe. Conventional ducted systems are notorious for poor air quality. Ductwork used in these systems can become a breeding ground for viruses, bacteria, molds and other allergens. When air is blown through the ducts, allergens can spread throughout a room and threaten your health. YMGi mini split systems doesn't create a lair for them to grow in, so your air is cleaner, and you can breathe healthier.



## Experience Maximum Air Filtration

YMGi eliminates problems by eliminating ducts and incorporating our standard washable air filter. We also offer advanced optional filters, such as our active enzyme filter, cold catalyst filter or static electric filter. These filters trap and catch biological contaminants that normal filters can't, protecting you and making your room an allergy-free haven, even if you have pets.

## Sleep Better

If you seleep with the central air conditioner turned off, you may feel too hot and wake up at night. But, when you sleep with it turned on, you may feel too cold and uncomfortable. YMGi DC Inverter SOLO & CHOIR mini split systems are designed with Sleep Mode, a feature that can give you the best night's sleep you've ever experienced. In Sleep Mode, YMGi SOLO & CHOIR systems automatically adjust a room's temperature to your body temperature and sleep pattern, so you remain comfortable all night long. Sleep Mode even saves energy, too. Better sleep and less money, now that deserves a big ovation!

## Common Problems with Traditional Central Systems

- Indoor Air is 70 times more polluted than outdoor air.
- 50% of all illnesses are either aggravated or caused by poor indoor air quality.
- Up to 40lbs of dust is created annually through everyday living.
- Headaches, allergies, asthma, respiratory infections...



# UNIQUE FEATURES

both **Simple** & **Profound**



## Intelligent Defrosting

YMGi on-demand defrosting is intelligently controlled by a YMGi microcomputer processor to ensure the worry-free, heat pump performance, in mild and cold weather. This unique ON-DEMAND defrosting design improves heating efficiency, thermal performance and keeps your room comfortable throughout the winters and years.

## High Efficiency

All YMGi DC Inverter systems, with SEER up to 32SEER, far exceeding the current world standards for energy efficiency, ETL listed in both the U.S. and Canada, and certified by and listed with AHRI and/or ENERGY STAR®.

## U-TOUCH Remote Control

A remote of the U-TOUCH function puts control of a room's temperature in the palm of your hand. It is the most user-friendly remote control available. There is a temperature sensor built into the remote control, which can sense the local temperature wherever the remote control is located. Other mini split systems place their indoor air temperature sensor behind the grille of an indoor unit. This U-Touch feature allows the control of comfort wherever people are, instead of high on the wall or ceiling. This feature increases controllability with better accuracy and higher efficiency.

## YMGi Technology

### Adaptive Smart Control

The adaptive smart control fuzzy logics enables responsive and precise control over the compressor frequency, voltage, fan speed and valve opening size, ensuring quick and precise and safe adjustment to deliver the exact amount of warm or cool air needed, with minimum energy consumption.

### Soft Start

The compressor starts at a lower voltage and frequency and ramps up over a period of time, which makes a smooth and soft start. This reduces energy consumption of the outdoor unit by approximately 30% during start-up, compared to other regular full-speed start-up. It also reduces electrical circuit load when more than one electrical device is used.

### Compressor Crank Case Heater

This component helps heat up the compressor when the outdoor ambient temperature is low, so that the compressor can have a smooth easy start, especially in extreme cold weather.

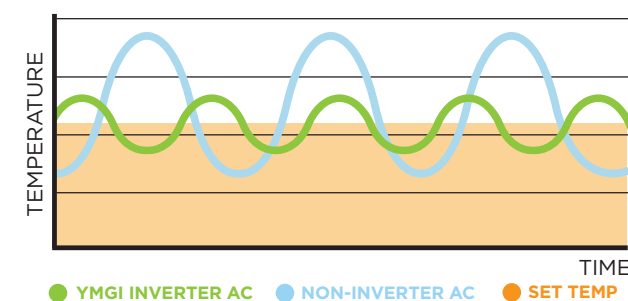
### De-Ice Base Pan Heater

This component prevents damage to your unit-fan blade, coil, compressor, etc., once being actuated by activating when outdoor temperatures goes below freezing and ice can form in the base pan.

### Over-Current & Over-Heat

### Over-Pressure Protection

Built-in protection against both over-current, over-heat and over-pressure to ensure safe operation and longer life of the components and unit.



### Low Ambient Temperature

### Heating & Cooling

When outdoor temperatures reach low ranges, heat pump heating capacity and efficiency can drop. In low ambient temperatures, YMGi's state-of-the-art DC Inverter SOLO and CHOIR systems heating and cooling technology operate better than many other systems available on the market. The powerful heating system ensures you stay warm, even in extreme cold weather. YMGi's DC Inverter technology and special control logic make cooling in low ambient temperature ranges a reality.

### Optimized System Design

Components are both individually and systematically optimized to ensure SOLO and CHOIR system work in wide ranges of applications, and deliver the right amount of heating or cooling, when you need it, at both maximum efficiency.

### DC Inverter Technology - Continuously Adjusting for Profound Performance

Unlike conventional systems that cycle between on and off repeatedly, YMGi Symphony Series SOLO and CHIOIR DC Inverter systems monitor room temperature and continuously adjust compressor speed up or down as needed to provide precise temperature and humidity control. DC Inverter systems achieve this by converting alternating current (AC) to Direct Current (DC), modulating pulse width, and then directing the inverted current back to alternating current (AC) at the optimum frequency, precisely generating the thermal output needed, and maintaining the selected room temperature within very narrow ranges, while consuming much less energy. The incoming electrical power has a fixed frequency of 60 Hertz. By converter and inverter, the various current frequencies and voltages can be generated to supply the system, allowing the compressor to run at different speeds that suit the needs of various capacities and comfort levels at the minimum energy consumption.

# UNIQUE FEATURES

both **Smart & Safe**

## Comfort & Convenience

### Auto Mode

By intelligently sensing and comparing the set temperature to the room temperature, this feature switches between heating and cooling modes automatically delivering the exact amount of warm or cool air needed to ensure maximum comfort.

### Fast Turbo Heating and Cooling

This function boosts cooling or heating capacities at high compressor speed and fan speed, and makes rooms reach set temperatures comfortable quickly as possible.

### Air Swing

With motorized louvers that can pivot back and forth, or left and right, to direct air to every corner in a room to maintain an even temperature, with no hot or cold spots. The louver motor can be turned off, so that you can direct air flow to a specific spot in a room. And it can all be adjusted using the remote control.

### Hot Start-Up (Anti-Cold Air Blowing)

When the heating operation starts up or whenever the system transitions from cooling to heating, the indoor fan motor doesn't rotate immediately, to avoid cold air being released into the room. When the indoor unit, coil and pipes are warm enough, the fan starts and circulates warm air, avoiding cold air being released into the room.

### Sleep Mode

Automatically adjust room temperature to adapt to lower cooling/heating load needs while you sleep. With the Sleep Mode on, the system will adjust the room target temperature to slowly rise when cooling or fall when heating, over the sleep mode, before the unit stops. Saving energy, and allowing you to sleep comfortably by preventing a sudden changes in room temperature.



### 24-Hour On/Off Timer

Allows for cooling or heating to be set to start or stop at any time of day.

### Memory and Auto Restart

YMGi system's remember the operation mode, airflow, and temperature settings. So if your unit should lose power, it will automatically restart at the remembered settings you have programmed, when power is restored.

### Self-Diagnosing

Should your system have a problem, the unit will display an error code on the LCD display of indoor unit, or LED lights on outdoor control boards. A problem can be diagnosed easily and accurately, and the service agent can finish the repair quickly.

### Digital Display On/Off

Our easy to read LCD display can be turned off, whenever you want, by pressing the "LIGHT" button on the lower right-hand corner of the remote control. This feature allows a room to remain dark at night, or you can turn the digital display on and use the display as a night-light.

## System Safety Protections

- Low Pressure / Refrigerant Leaking
- Compressor Discharge Temperature
- Outdoor Coil Temperature
- Outdoor Ambient Temperature
- Indoor Coil Temperature
- Indoor Air Temperature
- Built-in Over-Current Fuse at Outdoor Unit
- Built-in Over-Current Fuse at Indoor Unit
- Optional De-Ice Heater in Outdoor Unit Pan

## Environmentally Friendly Inside & Out

### Standard Washable Filter and Advanced Filters

All systems come with a standard washable filter. YMGi offers optional advanced filters to remove biological contaminants like viruses, bacteria, molds and allergens that threaten your health. These include a cold-catalyst filter, active enzyme filter, or an electric static filter.

### Eco-Friendly Refrigerant R410A

All SOLO and CHOIR systems use R-410A refrigerant, which is Hydrofluorocarbon (HFC) Free with zero ODP (Ozone Depletion Potential) and eco-friendly.

### RoHS Approved Materials

YMGi only uses RoHS approved material. RoHS restricts the use of harmful substances commonly used in electronic equipment.

### Nitrogen-Protected Brazing

This assures reduced oxidation of joined metal parts, reliable performance and a longer unit life.

### Volatile Liquid Coil Cleaning

All the component surfaces, joints, and corners are cleaned with volatile cleaning agents, to ensure safe clean equipment.

### Leakage Checked Refrigerant System

All refrigerant pipes, joints and components are checked for leakage during manufacturing, to ensure every YMGi product is safe and environment friendly.

### Wide-Angle Air Spread and Long Air-throw

Multi-dimensional airflow of short to long air-throw and multiple indoor fan motor speeds, help air to reach every corner of the room.

### Independent Dehumidification

Prioritizes the reduction of humidity levels vs. temperature in the room. Traps the humidity in the indoor air and extracts moisture, providing drier, more comfortable environment.

### Random Pitch Cross-Flow Fan Wheel

Limits and offsets high-pitch sound and low frequency sound which are normally generated during fan wheel rotating operation, to provide whisper quiet operation.

## Perfect Temperature in Every Room

Control the temperature independently in each and every room. YMGi Symphony SOLO and CHOIR systems allow you to set the temperature for each room with an easy-to-use, wireless remote control or wired control. Just click Auto Mode and consistent indoor comfort is delivered to each room. Sensors detect temperature differences between target temperature and the set room temperature, and automatically direct the system to deliver the right amount of airflow and comfort.

## Silent Comfort

- Computer designed and optimized wind tunnel
- Mesh-net combed intake air pattern
- Cross-flow fan wheel
- Sound absorbing insulation
- Vibration absorbing rubber grommets
- Lubricated motor bearings, and molded fan motor
- Precisely made reliable quiet compressors

## Quiet Operation

All YMGi SOLO & CHOIR systems reduce interior noise levels by optimizing the acoustic design at the airflow tunnel, using anti-leak insulation materials, incorporating a multi-speed motor and random pitch cross-flow fan wheel. All these add up to a quieter and gentler heating and cooling system.

The SOLO and CHOIR outdoor units adjust the rotating speed up or down following the actual cooling or heating loads, which means they will climb up to run at the highest speed to cool or heat the room at start-up and stay at low speed maintaining temperatures. Oil in the compressor reduces friction during operation with less vibration, resulting in a more durable compressor and quieter operation.

Additionally vibration absorbing jackets are wrapped around the compressors. The copper pipes between the compressor, the 4-way reversing valves, stopping valves and other refrigeration components are designed to reduce tension and vibration. Weight-balancing rubber is also used to lower piping vibration in extreme operating conditions.

All these and more, minimize vibration and tension, which reduces not only noise, but helps prevent the leakage of refrigerant gas over time. The result is a system that operates quietly, efficiently, safely, and dependably for years.

# PRODUCT SPECIFICATIONS

## YMGI Symphony SOLAR

### DC INVERTER Single-Zone Wall-Mounted Mini Split



#### YMGI DC INVERTER SOLAR Single Zone- Wall Mounted Indoor Unit

The SOLO single zone mini split wall mounted unit, as the most popular evaporator style, offers a heating and cooling solution that runs quietly and fits tastefully into any single room application. The installation of each indoor unit uses an integrated mounting plate and only requires a 3" opening through the wall to run a conduit, which houses all necessary condensate drain hose, refrigerant pipes and electrical wiring. Units mount high on the wall, out of sight. A motorized louver system helps quietly distribute an even airflow throughout the space providing quiet, precise temperature control and energy efficiency, for a comfortable living and work environment.

#### YMGI DC INVERTER SOLO Single Zone- Outdoor Unit

The SOLO outdoor condensing unit takes electrical power from the disconnect switch for most residential and commercial heating and cooling applications (115/1/60 for 09 or 12K single zone, 208-230/1/60 for other models). It provides electric power to both the outdoor unit and indoor unit. Refrigerant is pumped as a thermal medium to dispense heat into ambient air, in the summer; while absorbing heat from ambient air in the winter. The sleek design allows mounting in a variety of discreet locations, including on the ground, on the wall, under decks or even on balconies.

## DC Inverter Mini System-Single Zone-(56) up to 32SEER SOLAR PV Powered/Boosted Wall Mount 12 & 18K

- Optimized unique management on city AC and PV panel DC power
- Powered with PV panel DC power, backed up by city power
- Advanced temperature comfort and safety control
- Can be integrated to work with existing solar panels, if parameters matched
- Minimized city power usage, as low as 30W
- R410A refrigerant and environment friendly materials, green products
- New solar panel installation eligible for Federal tax credit and/or State and/or utility company's rebate/incentive programs

Models	System		WMMS-12KS-V2B(56)	WMMS-18KS-V2B(56)
	Indoor Unit		WMMS-12ES-V2B(56)	WMMS-18ES-V2B(56)
	Outdoor Unit		WMMS-12CS-V2B(56)	WMMS-18CS-V2B(56)
	Solar Panel		WMMS-12PS-V2B(56)	WMMS-18PS-V2B(56)
Cooling		Btu/h(L/S/H)	4500/12000/14000	6000/18000/22350
Heating		Btu/h(L/S/H)	3250/13000/14500	4100/21000/24000
MCA		AMP	9.6	13.2
HVAC CIRCUIT BREAKER		AMP	20	30
EER/COP	Cooling	Btu / h-W	15.2	15.1
	Heating	W/W	4.2	4.1
SEER		Btu / h-W	UP to 32	UP to 32
Airflow	Indoor Unit	CFM (H/M/L)	300	500
Noise	Indoor Unit	dB(A) (H/M/L)	36/32/26	44/40/35
	Outdoor Unit	dB(A)	52	54
<b>City Power Consumption, Without Any Solar Panel Installed</b>				
Power Supply		V/Ph/Hz	208-230/1/60	208-230/1/60
Power Input	Cooling	W(L/S/H)	120/1000/1450	300/1500/2500
	Heating	W(L/S/H)	220/1200/1500	335/1600/2550
<b>City Power Consumption, with Solar Panel Installed / tested at STC Solar Irradiance of 1000 W/m<sup>2</sup></b>				
Power Input	Cooling	W (L/S/H)	30 / 200 / 450	30 / 400 / 650
	Heating	W (L/S/H)	30 / 300 / 500	30 / 500 / 700
<b>Accepted Solar Panel - Power Data Ranges (All Shall be of Same Type and Same Model)</b>				
Open Circuit Voltage Voc (All PV Panels in Series)		V	22~165	22~165
Short Circuit Current Isc (Per Panel)		A	5~9	5~9
Nominal Power Output (STC Condition) Pmax (Per Panel)		W	200 + (to 400)	200 + (to 400)
Power Output Tolerances (Per Panel)		W	-0 / +3 to +5	-0 / +3 to +5
Allowed PV Panel		W	Mono-crystalline or Poly-silicon	
Allowed PV Panel Qty. in Series		Pieces	1 to 5	1 to 5
Recommended PV Panel Qty.		<small>Southern CA-FL / Northern CA-NC / OR-NY / WA-NE</small>	1-3 / 2-4 / 3-5 / 4-5	2-4 / 3-5 / 4-5 / 5
<b>Dimensions</b>				
Net Dimensions	Indoor	W x H x D	33.3 x 10.8 x 7.1	37.0 x 11.7 x 7.9
	Outdoor	W x H x D	33.4 x 21.3 x 12.6	35.0 x 27.6 x 13.4
	Solar Panel	W x H x D	58.3x39.1x1.4	
Gross Dimensions	Indoor	W x H x D	36.0 x 14.0 x 10.0	39.8 x 15.0 x 11.2
	Outdoor	W x H x D	34.6 x 22.8 x 14.2	40.6 x 28.9 x 18.1
	Solar Panel	W x H x D	62x2x43.1x3.9	
<b>Weight</b>				
Net Weight	Indoor / Outdoor / Solar Panel	LBS	24.2 / 88.1 / 37.0	28.7 / 110.1 / 37.0
Gross Weight	Indoor / Outdoor / Solar Panel	LBS	30.8 / 96.9 / 52.9	37.5 / 121.1 / 52.9
<b>Loading Capacity</b>				
20'GP / 40'GP / 40'HQ		Sets	116 / 235 / 270	62 / 125 / 145

#### Important Notes:

1. Performance without solar panel being installed is rated for matched system at standard conditions-cooling ID 80/67°F, OD 95°F; heating ID 70/60°F OD 47/43°F. Performance varies upon weather changes.
2. Performance with solar panel being installed is rated at same ID conditions but OD STC conditions of 1000W/m<sup>2</sup> irradiance, 25°C (77°F) cell temperature. AM 1.5g spectrum according to EN 60904.3.
3. Watch unit operation during extreme weather conditions in summer and winter. After the unit is used for quite a while in these weather, unit may step into protection mode and stay idle.
4. Heating capacity and efficiency decrease, as outdoor temperature drops. Cooling capacity and efficiency drops, as outdoor temperature rises.

# PRODUCT SPECIFICATIONS

## YMGI Symphony SOLO

DC INVERTER

Single-Zone Wall-Mounted Mini Split



### YMGI DC INVERTER SOLO Single Zone-Wall Mounted Indoor Unit

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### YMGI DC INVERTER SOLO Single Zone-Outdoor Unit

The SOLO outdoor condensing unit takes electrical power from the disconnect switch for most residential and commercial heating and cooling applications (115/1/60 for 09 or 12K single zone, 208-230/1/60 for other models). It provides electric power to both the outdoor unit and indoor unit. Refrigerant is pumped as a thermal medium to dispense heat into ambient air, in the summer; while absorbing heat from ambient air in the winter. The sleek design allows mounting in a variety of discreet locations, including on the ground, on the wall, under decks or even on balconies.



## DC Inverter Mini System-Single Zone-(57)2,3 16SEER SOLO Wall Mount 09, 12, 18 & 24K

System Model Number		WMMS-09K-V2A(57)2	WMMS-12K-V2A(57)2	WMMS-18K-V2B(57)3	WMMS-24K-V2B(57)3
Power Supply	V/Ph/Hz	115/1/60	115/1/60	208-230/1/60	208-230/1/60
Standard/ Min. /Max. Cooling Capacities	Btu/h	9000 /3,500 /11,000	11800 /3,300 /12,500	18000 /4,500 /21,000	22000 /6,400 /24,000
Standard/ Min. /Max. Heating Capacities	Btu/h	9800 /3,500 /11,000	13000 /3,400 /13,500	19200 /4,000 /23,000	26600 /4,100 /26,600
Standard/ Min. /Max. Cooling Power Input	W	750 /220/1,100	1260 /260 /1,340	1620 /200 /2,400	2,200 /300 /2,550
Standard/ Min. /Max. Heating Power Input	W	830 /230 /1,230	1,320 /250 /1,360	2,600 /300 /2,600	2,800 /320 /2,800
Cooling /Heating Current	Amp.	9 /9.5	15 /15.5	7.85 / 7.10 11.77 / 10.65	11.50 / 10.50 13.00 / 12.80
Rated Power Input	W	1230	1360	2600	2800
Min. Current (MCA)	Amp.	12.2	19.2	14.3	16.6
Max. Over Current Protection	Amp.	20	25/ 30	20	25/ 30
EER /COP /SEER /HSPF	Btu/h.W	12/12/16/8.6	9.4/9.8/16/8.6	11.1/8.0/16.0/8.0	10.0/10.0/16.0/9.5
Air Flow Volume-Indoor Unit	CFM	330 / 277 / 224 / 188	341 / 288 / 235 / 200	471 / 400 / 330 / 271	589 / 441 / 306 / 206
	Pints/Day	1.69	2.96	4.5	4.5
Indoor Unit Model	--	WMMS-09E-V2A(57)2	WMMS-12E-V2A(57)2	WMMS-18E-V2B(57)3	WMMS-24E-V2B(57)3
Fan Type	--	Cross-flow	Cross-flow	Cross-flow	Cross-flow
Fan Wheel Diameter x Length (DxL)	Inch	φ3 3/5 x 23 2/5	φ 3 3/5 x 23 2/5	φ 3 6/7 x 25 3/5	φ 3 6/7 x 30 1/8
Cooling Speed SH/H/M/L	RPM	1300 /1100 /900 /700 /-	1350 /1150 /950 /750 /-	1400 /1150 /1000 /850	1350 /1150 /1000 /850
Heating Speed SH/H/M/L	RPM	1300 /1140 /980 /820 /-	1350 /1190 /1020 /850 /-	1450 /1150 /1000 /950	1350 /1150 /1000 /900
Fan Motor Power Output	W	10	10	20	35
Fan Motor RLA	Amp.	0.38	0.38	0.32	0.31
Fan Motor Capacitor	μF	4	4	1.5	2.5
Ele. Heater	W	NA	NA	NA	NA
Evaporator Type	--	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
Evaporator Pipe Diameter	Inch	φ 3/10	φ 3/10	φ 3/10	φ 3/10
Evaporator Row-fin Gap	Inch	2-3/50	2-3/50	2-7/127	2-7/127
Evaporator Coil W x H x D	Inch	24x11 3/5x1	24x11 3/5x1	25 13/15x12x1	51/2 17/27X1
Swing Motor Model	--	MP24BA	MP24BA	MP28VB	MP35XX
Swing Motor Power Output	W	2	2	2	2
Fuse Location-Size	Amp.	PCB 3.15 Transformer 0.2	PCB 3.15 Transformer 0.2	PCB 3.15 Transformer 0.2	PCB 3.15 Transformer 0.2
Set Temperature Range	°F	60.8~86	60.8~86	60.8~86	60.8~86
Sound Pressure Level	dB (A)	41 /37 /35 /32	43 /39 /35 /32	48 /43 /38 /34	49 /43 /39 /34
Sound Power Level	dB (A)	51 /47 /45 /42	53 /49 /45 /42	58 /53 /48 /43	59 /53 /49 /44
Dimension of Unit (W x H x D)	Inch	30.3 x 11.1 x 7.9	30.3 x 11.1 x 7.9	34.1 x 12.0 x 8.5	39.7 x 12.4 x 8.7
Dimension of Carton Box (W x H x D)	Inch	33.2 x 13.5 x 10.3	33.2 x 13.5 x 10.3	37.2 x 15.0 x 11.6	42.2 x 15.6 x 12.3
Net/Gross Weight	LBs	18.7 /25.4	18.7 /25.4	27.0 /35.3	33.1 /44.1
Outdoor Unit Model	--	WMMS-09C-V2A(57)2	WMMS-12C-V2A(57)2	WMMS-18C-V2B(57)3	WMMS-24C-V2B(57)3
Compressor Trademark	--	LD	LD	MTSUBISHI	SANYO
Compressor Model	--	QXA-A091ZE190	QXA-A091ZE190	SNB130FGYMC	C-6RZ146H1A
Compressor Oil	--	FVC68D	FVC68D	FV50S	FV50S
Compressor Type	--	Rotary	Rotary	Rotary	Rotary
Compressor LRA	Amp.	18.60	18.60	27.00	41
Compressor RLA	Amp.	6	6	10.86	8.38
HVAC Type Circuit Breaker	Amp.	20	20	30	30
Compressor Power Input	W	980	980	2500	1630
Compressor Overload Protector	--	1NT11L-6233	1NT11L-6233	1NT11L-6578	1NT11L-3979
Fan Type	--	Axial-flow	Axial-flow	Axial-flow	Axial-flow
Fan Blade Diameter	Inch	φ15 3/4	φ15 3/4	φ 20 1/2	φ 20 1/2
Fan Motor Speed	RPM	900 / 850	900 / 850	690	690
Fan Motor Power Output	W	30	30	60	60
Fan Motor RLA	Amp.	0.18	0.18	0.62	0.59
Fan Motor Capacitor	μF	NA (DC)	NA (DC)	3.5	3.5
Condenser Form	--	Aluminum Fin-Copper Tube	Aluminum Fin-Copper Tube	Aluminum Fin-Copper Tube	Aluminum Fin-Copper Tube
Condenser Pipe Diameter	Inch	φ 27	φ 27	φ 27	φ 27
Condenser Rows-Fin Gap	Inch	2-3/50	2-3/50	2-7/127	2-7/127
Condenser Coil LxHxD	Inch	29 5/7 x 1 x 19 1/2	29 5/7 x 1 x 19 1/2	32 20/21 x 1 1/2 x 26	32 20/21 x 1 1/2 x 26
Max. Pressure for the Discharge Side	PSIG	623.5	623.5	623.5	623.5
Max. Pressure for the Suction Side	PSIG	362.5	362.5	362.5	362.5
Cooling Operation Outdoor Ambient Temperature Ranges	°F	64.4~113	64.4~113	55~118	55~118
Heating Operation Outdoor Ambient Temperature Ranges	°F	5~75	5~75	5~75	5~75
Throttling Method	--	Electron Expansion Valve	Electron Expansion Valve	Capillary	Electron Expansion Valve
Defrosting Method	--	Automatic Defrosting	Automatic Defrosting	Automatic Defrosting	Automatic Defrosting
Climate Type /Zone	--	T1 /Sub-Tropical Zone	T1 /Sub-Tropical Zone	T1 /Sub-Tropical Zone	T1 /Sub-Tropical Zone
Isolation /Moisture Protection	--	I /IP24	I /IP24	I /IP24	I /IP24
Sound Pressure / Power Level	dB (A)	53 /63	55 /65	56 /66	53 /63
Dimensions of Unit (W x H x D)	Inch	33.4 x 12.6 x 21.3	33.4 x 12.6 x 21.3	37.6 x 15.6 x 27.6	37.6 x 15.6 x 27.6
Dimensions of Carton Box (W x H x D)	Inch	34.6 x 14.2 x 22.9	34.6 x 14.2 x 22.9	40.4 x 17.9 x 28.9	40.4 x 17.9 x 28.9
Net/Gross Weight	LBs	68.4 /77.2	68.4 /77.2	106 /117	115 /126
Refrigerant Name	--	R410A	R410A	R410A	R410A
Refrigerant Factory Charge	OZs	35.30	35.3	45.86	54.7
Length without Adjusting Refrigerant	Ft.	25	25	25	25
Additional Refrigerant Charge	OZs/Ft	0.2	0.2	0.2	0.215
Outer Diameter of Liquid Pipe	Inch	1/4"	1/4"	1/4"	1/4"
Outer Diameter of Gas Pipe	Inch	3/8"	3/8"	1/2"	1/2"
Max. Allowed ID-OD Elevation Difference	Ft.	32.8	32.8	33	32.8
Max. Allowed ID-OD Distance/Length	Ft.	65.6	65.6	82	82
Loading Quantity ( 20' / 40' GP / 40'HQ )	Systems	101 / 218 / 252	101 / 218 / 252	62 / 131 / 149	59 / 123 / 142

### Important Notes:

- Performance rated for matched system at standard conditions-cooling ID 80/67°F, OD 95°F; heating ID 70/60°F, OD 47/43°F. Unit performance varies when weather changes from the standard one.
- Select equipment capacity sizes per space load calculation schedule and cooling & heating hours. Not to over size or under size equipment.
- Watch unit operation during extreme weather conditions in summer and winter. wind baffle helps system cooling & heating performance in low ambient temperature ranges.



# PRODUCT SPECIFICATIONS

## INDOOR UNIT



WMMS-09E-V2A/B(58)2  
WMMS-12E-V2A/B(58)2

WMMS-18E-V2B(58)2

WMMS-24E-V2B(58)2

WMMS-30E-V2B(58)2  
WMMS-36E-V2B(58)2

## OUTDOOR UNIT



WMMS-09C-V2A/B(58)2  
WMMS-12C-V2A/B(58)2

WMMS-18C-V2B(58)2

WMMS-24C-V2B(58)2

WMMS-30C-V2B(58)2  
WMMS-36C-V2B(58)2

## DC Inverter Mini System-Single Zone-(58)2 16-22SEER SOLO Wall Mount 09, 12, 18, 24, 30 & 36K

System Model	WMMS-09K-V2A/B(58)2		WMMS-12K-V2A/B(58)2		WMMS-18K-V2B(58)2		WMMS-24K-V2B(58)2		WMMS-30K-V2B(58)2		WMMS-36K-V2B(58)2	
	COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	COOLING	HEATING
Power Source	A:115/1/60 B:208-230/1/60		A:115/1/60 B:208-230/1/60		A:115/1/60 B:208-230/1/60		A:115/1/60 B:208-230/1/60		A:115/1/60 B:208-230/1/60		A:115/1/60 B:208-230/1/60	
Total Capacity (Btu/h) (High/ Standard/Low)	10600/9000/4435		11100/9500/3200		14000/12000/4500		14500/13000/2350		22350/18000/6000		25000/19000/4100	
Nominal heating capacity (ID 70/60 OD 47/43F)	9500		13000		16400		25000		26000		26500	
Standard Set-up Tested in Lab-Heating capacity (ID 70/60 OD 47/43F)	8600		11000		14500		21500		22000		22500	
Standard Set-up Tested in Lab-Heating capacity (ID 70/60 OD 5F)	7800		8900		14500		21500		22000		22500	
Frequency(Hz) (High/Standard/Low)	70/41/15		63/44/15		80/57/15		75/65/15		100/60/15		100/60/15	
Power Input (W) (High/Standard/Low)	1050/660/180		1100/700/220		1450/1000/120		1500/1200/220		2500/1500/300		2550/1600/335	
Rated Current (A) (High/ Standard)	A:13.5/7.0 B:6.5/3.2		A:14.5/7.5 B:6.8/3.5		A:14.5/11 B:7.0/5.2		A:15.5/12.5 B:7.5/6.0		12.0/7.5		12.5/6.7	
SEER / HSPF (Btu/h.w)	22		9.8		20		9.6		18.0		10.2	
EER (Btu/h.w)	14.0		12.5		12		12		12		12	
Dehumidifying Volume (Pints/Hr)	1.7		2.5		4.2		5.5		6.3		7.4	
Model of Indoor Unit	WMMS-09E-V2A/B(58)2		WMMS-12E-V2A/B(58)2		WMMS-18E-V2B(58)2		WMMS-24E-V2B(58)2		WMMS-30E-V2B(58)2		WMMS-36E-V2B(58)2	
Fan Motor Speed (RPM) (SH/H/M/L)	1300/1060/920/740		1320/1200/1100/960		1300/1080/900/740		1300/1160/1040/920		1350/1200/1050/900		1420/1250/1150/1050	
Air Flow Volume (CFM) (SH/H/M/L)	300/277/253/218		330/295/253/218		500/460/383/324		560/471/412/353		740/670/640/580		740/670/640/580	
Output of Fan Motor (w)	20		35		20		35		40		40	
Input of Heater (w)	/		/		/		/		/		/	
Fan Motor Capacitor (uF)	4.0 / 1.0		4.0 / 1.0		1.5		2.5		3.5		3.5	
Fan Motor RLA(A)	0.38 / 0.20		0.38 / 0.20		0.25		0.45		0.4		0.4	
Fan Type-Piece	Cross flow fan-1		Cross flow fan-1		Cross flow fan-1		Cross flow fan-1		Cross flow fan-1		Cross flow fan-1	
Fan Wheel Diameter-Length (In)	Φ 3.6 X 25.4		Φ 3.6 X 25.4		Φ 3.9 X 28.0		Φ 3.9 X 28.0		Φ 4.25 X 41.0		Φ 4.25 X 41.0	
Evaporator Coil Type	Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube	
Coil-Copper Pipe Diameter (In)	Φ 0.28		Φ 0.28		Φ 0.28		Φ 0.28		Φ 0.28		Φ 0.28	
Row-FPI	2-18.2		2-18.2		2-18.2		2-16.9		2-19		2-19	
Coil length (L) x Height (H) x depth (D) (In)	25.4X1X10.5		25.4X1X10.5		28.1X12X1		30.1X13.5X1		42.25X15X1		42.25X15X1	
Swing Motor Model	MP24AA		MP24AA		MP28VB		MP35XX		MP24BA		MP24BA	
Output of Swing Motor (W)	2.4		2.4		2.5		2.5		2		2	
Fuse (A)	PCB 3.15A		PCB 3.15A		PCB 3.15A Transformer 0.2A		PCB 3.15A Transformer 0.2A		PCB 3.15A Transformer 0.2A		PCB 3.15A Transformer 0.2A	
Sound Pressure Level dB (A) (SH/H/M/L)	38/34/30/26		40/36/32/26		46/44/40/35		48/44/40/35		52/50/48/40		52/50/48/40	
Sound Power Level dB (A) (SH/H/M/L)	48/44/40/36		50/46/42/36		56/54/50/45		58/54/50/45		62/60/58/50		62/60/58/50	
Model of Outdoor Unit	WMMS-09C-V2A/B(58)2		WMMS-12C-V2A/B(58)2		WMMS-18C-V2B(58)2		WMMS-24C-V2B(58)2		WMMS-30C-V2B(58)2		WMMS-36C-V2B(58)2	
Compressor Manufacturer	Sanyo, Mitsubishi or Equivalent		Sanyo, Mitsubishi or Equivalent		Sanyo, Mitsubishi or Equivalent		Sanyo, Mitsubishi or Equivalent		Mitsubishi or Equivalent		Mitsubishi or Equivalent	
Compressor Model	C-6RZ110H1A		C-6RZ110H1A		C-6RZ146H1A		C-6RZ146H1A		C-6RZ146H1A		C-6RZ146H1A	
Compressor Type	Twin Rotary DC		Twin Rotary DC		Twin Rotary DC		Twin Rotary DC		Rotary DC		Rotary DC	
L.R.A. (A)	33		33		41		41		45		67	
Compressor RLA(A)	4.59		4.59		8.4		8.4		9.7		13.5	
Compressor Power Input(W)	800		800		1640		1640		2200		3010	
Overload Protector	1NT11L-3979		1NT11L-3979		1NT11L-3979		1NT11L-3979		CS01F22H01		CS01F22H01	
Throttling Method	Electronic Expansion Valve		Electronic Expansion Valve		Electric Expansion Valve		Electric Expansion Valve		Capillary		Capillary	
Fuse Circuit Breaker of HVAC Type	A:30 B:20		A:30 B:20		20		30		30		40	
Starting Method	Transducer starting		Transducer starting		Transducer starting		Transducer starting		Transducer starting		Transducer starting	
Recommended Working Ambient Temp Range (F)	15°F ≤ T ≤ 115°F 5°F ≤ T ≤ 86°F		15°F ≤ T ≤ 115°F 5°F ≤ T ≤ 86°F		15°F ≤ T ≤ 115°F 5°F ≤ T ≤ 86°F		15°F ≤ T ≤ 115°F 5°F ≤ T ≤ 86°F		15°F ≤ T ≤ 115°F 5°F ≤ T ≤ 86°F		15°F ≤ T ≤ 115°F 5°F ≤ T ≤ 86°F	
Condenser Coil Type	Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube		Aluminum fin-copper tube	
Coil-Copper Pipe Diameter (In)	Φ 0.28		Φ 0.28		Φ 0.28		Φ 0.28		Φ 0.28		Φ 0.28	
Rows-FPI	2-18.2		2-18.2		2-18.2		2-18.2		2-1.4		2-1.4	
Coil Length (L) x Height (H) x Depth (D) (In)	23.9X20.0X1.7		29.4X20.0X1.7		33.0X26.0X1.5		38.1X29.4X1.5		37.5X29.5X1.5		37.0X30.0X1.7	
Fan Motor Speed (rpm) (H/L)	900/650		900 ± 20		900/680		900 ± 20		690/500		780/500	
Output of Fan Motor (W)	40		90		40		90		60		120	
Fan Motor RLA (A)	0.17		0.17		0.17		0.62		0.90		0.45	
Fan Motor Capacitor (uF)	(DC)		(DC)		(DC)		3		4		5	
Air Flow Volume of Outdoor Unit CFM	1120		1120		1890		1890		2860		2860	
Fan Type-Piece	Axial-1		Axial-1		Axial-1		Axial-1		Axial-flow		Axial-flow	
Fan Diameter (In)	15.7		15.7		20.5		21.7		21.75		21.75	
Defrosting Type	Auto defrost		Auto defrost		Auto defrost		Auto defrost		Automatic Defrosting		Automatic Defrosting	
Designed for Climate Type	T1		T1		T1		T1		T1		T1	
Isolation	I		I		I		I		I		I	
Moisture Protection	IP24		IP24		IP24		IP24		IP24		IP24	
MAX. Operating Pressure for the Discharge Side (PSIG)	551		551		551		551		560		560	
MAX. Operating Pressure for the Suction Side (PSIG)	174		174		174		174		170		170	
Sound Pressure Level dB (A) (H/M/L)	≤ 53		≤ 55		54		56		58/-/56		59/-/57	
Sound Power Level dB (A) (H/M/L)	≤ 63		≤ 65		64		66		68/-/66		69/-/67	
Liquid Pipe (In)	Φ 1/4		Φ 1/4		Φ 1/4		Φ 1/4		Φ 1/4		Φ 1/4	
Gas Pipe (In)	Φ 3/8		Φ 3/8		Φ 1/2		Φ 5/8		Φ 5/8		Φ 5/8	
ID Above/Blow OD (Ft.)	35/45		35/45		50/60		50/60		50/60		50/60	
Length (Ft.)	70		75		100		100		125		125	
Max Distance	25		25		25		25		25		25	
Outer Diameter	0.28		0.32		0.32		0.32		0.54		0.54	
Dimensions-Net W x H x D (Inches)	33.3 x 10.8 x 7.1		33.3 x 10.8 x 7.1		37.0 X 11.7 X 7.9		39.7 X 12.4 X 8.6		53.1 X 12.8 X 10.0		53.1 X 12.8 X 10.0	
Dimensions of Carton Box W x H x D (Inches)	36.0 x 14.0 x 10.0		36.0 x 14.0 x 10.0		39.8 X 15.0 X 11.2		42.2 X 15.5 X 12.3		56.6 X 16.5 X 13.5		56.6 X 16.5 X 13.5	
Gross / Net Weight (LBS)	31/24		31/24		37.5/28.7		46.3/35.3		60/44		60/44	
Dimensions-Net W x H x D (Inches)	33.4 x 21.3 x 12.6		33.4 x 21.3 x 12.6		35.0 X 27.6 X 13.4		36.2 X 31.1 X 14.6		38.5 X 31.3 X 16.8		38.5 X 31.3 X 16.8	
Dimensions of Carton Box W x H x D (Inches)	34.6 x 22.8 x 14.2		34.6 x 22.8 x 14.2		40.6 X 28.9 X 18.1		41.9 X 33.1 X 19.0		42.5 X 33.3 X 19.3		42.5 X 33.3 X 19.3	
Gross / Net Weight (LBS)	90/79		97/88		121/110		132/119		163/155		170/161	
Container Loading	Assumed One Model/ContainerSets (20/40/40/HQ)		109/232/252		109/232/252		60/125/145		47/96/114		36/75/92	
Safety Approval (Third Party)	ETL (C & US)		ETL (C & US)		ETL (C & US)		ETL (C & US)		ETL (C & US)		ETL (C & US)	
Performance Approval (Third Party)	AHRI		AHRI		AHRI		AHRI		AHRI		AHRI	

### Important Notes:

- Performance rated for matched system at standard conditions-cooling ID 80/67°F, OD 95°F; heating ID 70/60°F, OD 47/43°F. Unit performance varies when weather changes from the standard one.
- Select equipment capacity sizes per space load calculation schedule and cooling & heating hours. Not to over size or under size equipment.
- Watch unit operation during extreme weather conditions in summer and winter. wind baffle helps system cooling & heating performance in low ambient temperature ranges.

# Symphony CHOIR-Multiple Zone (59)2

## Indoor Units



### Ceiling Mount Cassette EC Unit

The EC indoor unit is the perfect solution for large open rooms that are more than 25' long or wide. 12K and 18K are 23.5" square, allowing easy installation into the 24" joist space and flush mount to the ceiling. 24K units are commonly used in commercial applications. Standard remote or wall mounted thermostats are available. Each unit has a digital readout that displays unit settings and technician information.

Items	Unit / Conditions	WMMS-12EC-V2B(59)2	WMMS-18EC-V2B(59)2	WMMS-24EC-V2B(59)2
Power Supply	Voltage/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
	Allowed Voltage Range	187-253V	187-253V	187-253V
Cooling Capacity (Btu/h)	High/Standard/Low	13900/12000/5200	20800/17200/6200	26500/22800/9600
	ID 70/60, OD 47/43F	13000	18100	27400
Heating Capacity (Btu/h)	ID 70/60, OD 17/15F	11600	16200	23800
	ID 70/60, OD 17/5F	9000	13100	20600
	Btu/h.W	16	16	16
SEER	Btu/h.W	8.2	8.2	8.2
HSPF	Btu/h.W	2.96	3.8	5.28
Dehumidifying Capacity	Pints/Hr.	2.96	3.8	5.28
Air Flow (CFM)	High/Medium/Low	353/312/245	353/312/245	694/522/366
Air-throw (Ft.)	Horizontal Installation	25-18 Upon Mounting Height/Speed/Temp.		
External Static Pressure	Water In.	0	0	0
	Pressure dB(A) (H/M/L)	39/37/35	39/37/35	45/43/41
Sound Level	Power dB(A) (H/M/L)	49/47/45	49/47/45	55/53/51
	Model	FN11T-2	FN11T-2	FN35B-1
Fan Motor	Shaft	Single	Single	Single
	Speed (RMP, H/M/L)	700/600/515	700/600/515	570/520/280
	Output (W)	11	11	50
	Input (W)	50	50	165
	Capacitor (uF)	1	1	3
Fan Wheel	Type-Piece	Centrifugal-1	Centrifugal-1	Centrifugal-1
	Diameter x Height (In.)	11.1 x 5.8	11.1 x 5.8	17.7 x 4.4
Swing/Step Motor	Model	MP35CB	MP35CB	MP35CB
	Piece	2	2	2
	Output (W)	2	2	2
Input Power of Ele. Heater	Type-W	NA	NA	NA
Electrical Protection Fuse	PCB / Transformer	T3.15A 250V / 0.2A		
Evaporator Coil	Type	Alu. Fin/Inner Grooved Copper Tube		
	Color	Blue	Blue	Blue
Copper Line Connections	Sealed by Dry Nitrogen	Yes	Yes	Yes
	Flare/Nut-Liquid + Gas	1/4" + 3/8"	1/4" + 1/2"	3/8" + 5/8"
Drain Hose Connection	OD (In.)	1.22	1.22	1.22
Condensate Pump	Installed-Lift (In.)	Yes-25	Yes-25	Yes-25
Refrigerant Environmentally Friendly	R410A	Yes	Yes	Yes
Filter	Type-Feature	Standard-Washable	Standard-Washable	Standard-Washable
	Size WxH (In.) - Qty.	13.56 x 13.13 - 1	13.56 x 13.13 - 1	21.38 x 21.34 - 1
Clean Coil Surface	Anti-Mildew Function	Yes	Yes	Yes
Pre-heating Function	Anti-Cold Blowing	Yes	Yes	Yes
Memory of Previous Set-ups	Power is Lost/Resumed	Yes	Yes	Yes
Auto-Restart Function	If Power is Resumed	Yes	Yes	Yes
Unit Dimensions	Net L x W x H (In.)	22.4 x 22.4 x 9.1	22.4 x 22.4 x 9.1	33.1 x 33.1 x 9.4
	Package L x W x H (In.)	33.4 x 28.7 x 12.2	33.4 x 28.7 x 12.2	37.8 x 37.8 x 12.2
Unit Weight	Net (LBs)	39.7	39.7	66
	Packaged (LBs)	50.7	50.7	84
Face Panel Dimensions	Net L x W x H (In.)	25.6 x 25.6 x 2	25.6 x 25.6 x 2	37.4 x 37.4 x 2.4
	Package L x W x H (In.)	28.7 x 26.4 x 4	28.7 x 26.4 x 4	40.9 x 40.4 x 4.5
Face Panel Weight	Net (LBs)	5.5	5.5	14
	Packaged (LBs)	8.1	8.1	22
Loading Capacity	20'/40'/40'HQ	102/209/246	102/209/246	72/72/144

Items	Unit / Conditions	WMMS-09EW -V2B(59)2	WMMS-12EW -V2B(59)2	WMMS-18EW -V2B(59)2	WMMS-24EW -V2B(59)2
Power Supply	Voltage/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
	Allowed Voltage Range	187-253V	187-253V	187-253V	187-253V
Cooling Capacity (Btu/h)	High/Standard/Low	12000/9000/4400	14000/12000/4500	21500/17000/6800	26500/22800/9600
	Max./Min.	12500/3400	14500/3800	22500/9500	28500/9800
Heating Capacity (Btu/h)	ID 70/60, OD 47/43F	9500	13000	18700	27400
	ID 70/60, OD 17/15F	8800	11600	16600	23600
	ID 70/60, OD 17/5F	8000	9100	13800	20600
SEER	Btu/h.W	22-16	20-16	18-16	18-16
HSPF	Btu/h.W	9.8-8.2	9.6-8.2	10.2-8.2	10.2-8.2
Dehumidifying Capacity	Pints/Hr.	1.7	2.96	3.8	5.28
Air Flow (CFM)	High/Medium/Low	300/253/218	330/253/218	460/380/320	470/410/350
Air-throw (Ft.)	Horizontal Installation	35-30 Upon Mounting Height/Speed/Temp.			
External Static Pressure	Water In.	0	0	0	0
	Pressure dB(A) (H/M/L)	34/30/26	36/32/26	45/42/40	48/46/44
Sound Level	Power dB(A) (H/M/L)	44/40/36	46/42/36	55/52/50	58/56/54
	Model	FN20T-PG	FN20T-PG	FN20W-PG	FN25B-PG
Fan Motor	Shaft	Single	Single	Single	Single
	Speed (RMP, H/M/L)	1050/980/920	1050/980/920	1200/1050/900	150/1000/850
	Output (W)	20	20	35	35
	RLA (AMP)	0.2	0.2	0.25	0.45
	Capacitor (uF)	1	1	1.5	2.5
Fan Wheel	Type-Piece	Cross Flow-1	Cross Flow-1	Cross Flow-1	Cross Flow-1
	Diameter x Width (In.)	φ 3.6 x 25.4	φ 3.6 x 25.4	φ 3.9 x 28	φ 9 x 30
Swing/Step Motor	Model	MP24AA	MP24AA	MP28VB	MP35XX
	Piece	2	2	2	2
	Output (W)	2.4	2.4	2	2
Input Power of Ele. Heater	Type-W	NA	NA	NA	NA
Electrical Protection Fuse	PCB / Transformer	T3.15A 250V / 0.2A			
Evaporator Coil	Type	Alu. Fin/Inner Grooved Copper Tube			
	Color	Blue	Blue	Blue	Blue
Copper Line Connections	Sealed by Dry Nitrogen	Yes	Yes	Yes	Yes
	Flare/Nut-Liquid + Gas	1/4" + 3/8"	1/4" + 3/8"	1/4" + 1/2"	1/4" + 5/8"
Drain Hose Connection	OD (In.)	0.67	0.67	0.67	0.67
Condensate Pump	Installed-Lift (In.)	NA	NA	NA	NA
Filter	Type-Feature	Standard-Washable	Standard-Washable	Standard-Washable	Standard-Washable
	Qty.	2	2	2	2
Clean Coil Surface	Anti-Mildew Function	Yes	Yes	Yes	Yes
Pre-heating Function	Anti-Cold Blowing	Yes	Yes	Yes	Yes
Memory of Previous Set-ups	Power is Lost/Resumed	Yes	Yes	Yes	Yes
Auto-Restart Function	If Power is Resumed	Yes	Yes	Yes	Yes
Unit Dimensions	Net WxHxD (In.)	30.3 x 9.8 x 7.5	32.7 x 11.2 x 7.9	37 x 11.7 x 7.9	39.7 x 24.2 x 7.9
	Package WxHxD (In.)	33.7 x 13.0 x 10.4	35.7 x 15.2 x 10.7	39.8 x 15.0 x 11.2	42.2 x 15.6 x 12.3
Unit Weight	Net (LBs)	18.7	24.3	28.6	35.2
	Packaged (LBs)	27.5	30.8	37.4	46.3
Loading Capacity	20'/40'/40'HQ	378/792/890	240/480/540	207/431/488	200/410/450

### Wall Mount EW Unit

The EW indoor unit is the perfect solution for small rooms (less than 25' long or wide). 09K, 12K, 18K and 24K units are available. EW units come with a standard remote control. Each unit has a digital readout that displays unit settings and technician information. The EW units are efficient and quiet. Installation is simple and easily hung on any wall to allow maximum headroom and floor space.



### Ceiling/Wall/Floor Mount EU Unit

The EU indoor unit is the perfect solution for rooms of small and large sizes. 09K, 12K, 18K and 24K units are available. You can choose between a remote, individual wall thermostats or central control thermostat. Each unit has a digital display that easily shows all unit settings and provide technician information when necessary. EU units are efficient and quiet, and they can be installed on a ceiling, wall or floor.



### Recessed Ceiling Mount EF Unit

The EF indoor unit is the perfect solution for rooms where surface mounting is not an option. 09K, 12K, 18K, and 24K are available. Individual or centralized wall thermostats makes perfect temperature control just a finger-touch away. EF units are efficient and quiet, and normally are installed above walk-in closets, foyers, or hallways. They can be used in offices, show rooms, lobbies, premium hotel rooms, galleries, libraries, and more.

Items	Unit / Conditions	WMMS-09EU-V2B(59)2	WMMS-12EU-V2B(59)2	WMMS-18EU-V2B(59)2	WMMS-24EU-V2B(59)2
Power Supply	Voltage/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
	Allowed Voltage Range	187-253V	187-253V	187-253V	187-253V
Cooling Capacity (Btu/h)	High/Standard/Low	10700/8500/4600	14100/11900/5900	21500/17000/6800	26500/22800/9600
	ID 70/60, OD 47/43F	9500	13100	18700	27400
Heating Capacity (Btu/h)	ID 70/60, OD 17/15F	8800	11600	16600	23600
	ID 70/60, OD 17/5F	8000	9100	13800	20600
	Btu/h.W	16	16	16	16
SEER	Btu/h.W	8.2	8.2	8.2	8.2
HSPF	Btu/h.W	2.96	3.8	5.28	5.28
Dehumidifying Capacity	Pints/Hr.	1.7	2.96	3.8	5.28
Air Flow (CFM)	High/Medium/Low	383/324/265	383/324/265	559/412/294	736/530/412
Air-throw (Ft.)	Horizontal Installation	35-30 Upon Mounting Height/Speed/Temp.			
	Upright Installation	35-20 Upon Mounting Location/Speed/Temp.			
External Static Pressure	Water In.	0	0	0	0
	Pressure dB(A) (H/M/L)	40/38/36	40/38/36	45/42/40	48/46/44
Sound Level	Power dB(A) (H/M/L)	50/48/46	50/48/46	55/52/50	58/56/54
	Model	FG10A	FG10A	FG20E	FG50A
Fan Motor	Shaft	Double	Double	Double	Double
	Speed (RMP, H/M/L)	690/610/480	690/610/480	985/800/680	985/800/680
	Output (W)	15	15	20	40
	Input (W)	55	55	110	145
	Capacitor (uF)	1	1	2.5	2
Fan Wheel	Type-Piece	Centrifugal-2	Centrifugal-2	Centrifugal-4	Centrifugal-4
	Diameter x Width (In.)	5.5 x 4.1	5.5 x 4.1	5.5 x 4.1	5.5 x 4.1
Swing/Step Motor	Model	MP35CB	MP35CB	MP35CB	MP35CB
	Piece	2	2	2	2
	Output (W)	2	2	2	2
Input Power of Ele. Heater	Type-W	NA	NA	NA	NA
Electrical Protection Fuse	PCB/Transformer	T3.15A 250V / 0.2A			
Evaporator Coil	Type	Alu. Fin/Inner Grooved Copper Tube			
	Color	Blue or the Like	Blue or the Like	Blue or the Like	Blue or the Like
Copper Line Connections	Sealed by Dry Nitrogen	Yes	Yes	Yes	Yes
	Flare/Nut-Liquid + Gas	1/4" + 3/8"	1/4" + 3/8"	1/4" + 1/2"	1/4" + 5/8"
Drain Hose Connection	OD (In.)	0.67	0.67	0.67	0.67
Condensate Pump	Installed-Lift (In.)	NA	NA	NA	NA
Refrigerant Environmentally Friendly	R410A	Yes	Yes	Yes	Yes
Filter	Type-Feature	Standard-Washable	Standard-Washable	Standard-Washable	Standard-Washable
	Size WxH (In.) - Qty.	21.8 x 8.68 - 2	21.8 x 8.68 - 2	21.8 x 8.68 - 2	21.8 x 8.68 - 2
Clean Coil Surface	Anti-Mildew Function	Yes	Yes	Yes	Yes
Pre-heating Function	Anti-Cold Blowing	Yes	Yes	Yes	Yes
Memory of Previous Set-ups	Power is Lost/Resumed	Yes	Yes	Yes	Yes
Auto-Restart Function	If Power is Resumed	Yes	Yes	Yes	Yes
Unit Dimensions	Net WxHxD (In.)	48 x 27.6 x 8.9	48 x 27.6 x 8.9	48 x 27.6 x 8.9	48 x 27.6 x 8.9
	Package WxHxD (In.)	52.8 x 32.3 x 11.8	52.8 x 32.3 x 11.8	52.8 x 32.3 x 11.8	52.8 x 32.3 x 11.8
Unit Weight	Net (LBs)	88	88	88	99
	Packaged (LBs)	110	110	110	119
Loading Capacity	20'/40'/40'HQ	66/132/132	66/132/132	66/132/132	66/132/132

Items	Unit / Conditions	WMMS-09EF-V2B(59)2	WMMS-12EF-V2B(59)2	WMMS-18EF-V2B(59)2	WMMS-24EF-V2B(59)2
Power Supply	Voltage/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
	Allowed Voltage Range	187-253V	187-253V	187-253V	187-253V
Cooling Capacity (Btu/h)	High/Standard/Low	10700/8500/4600	14100/11900/5900	21500/15300/6800	26500/23800/9600
	ID 70/60, OD 47/43F	9500	13100	18700	27400
Heating Capacity (Btu/h)	ID 70/60, OD 17/15F	8800	11600	16600	23600
	ID 70/60, OD 17/5F	8000	9100	13800	20600
	Btu/h.W	16	16	16	16
SEER	Btu/h.W	8.2	8.2	8.2	8.2
HSPF	Btu/h.W	2.96	3.8	5.28	5.28
Dehumidifying Capacity	Pints/Hr.	1.7	2.96	3.8	5.28
Air Flow (CFM)	High/Medium/Low	260/180/150	320/240/180	410/350/295	590/440/320
Air-throw (Ft.)	Horizontal Installation	25-20 Upon Mounting Height/Speed/Temp.			
External Static Pressure	Water In.	0	0	0	0
	Pressure dB(A) (H/M/L)	37/34/31	39/35/32	41/37/33	42/38/34
Sound Level	Power dB(A) (H/M/L)	47/44/41	49/45/42	51/47/43	52/48/44
	Model	FG30A	FG40A	FG60A	FG20E
Fan Motor	Shaft	Double	Double	Double	Double
	Speed (RMP, H/M/L)	970/760/640	960/830/700	920/780/720	985/800/680
	Output (W)	40	49	75	2 x 45
	Input (W)	80	90	100	2 x 85
	Capacitor (uF)	1	3	3	3
Fan Wheel	Type-Piece	Centrifugal-2	Centrifugal-2	Centrifugal-2	Centrifugal-4
	Diameter x Width (In.)	5.5 x 5.3	5.5 x 5.3	5.5 x 5.3	5.5 x 5.3
Swing/Step Motor	Model	NA			

# Symphony CHOIR-Multiple Zone (59)2

## Outdoor Units 2-5 Zones



WMMS-30CH-V2B(59)2  
1 to 2 zones



WMMS-36CH-V2B(59)2  
1-3 zones



WMMS-42CH-V2B(59)2  
1-4 zones

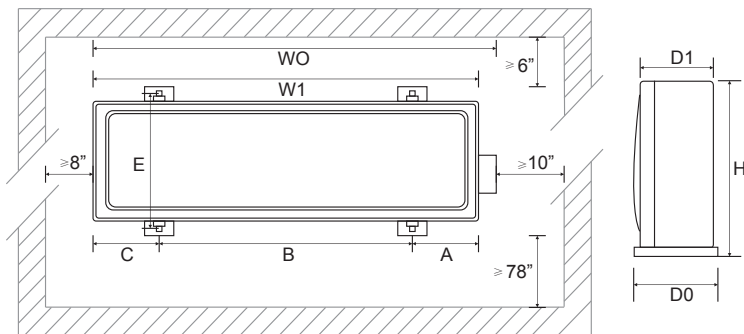


WMMS-48CH-V2B(59)2  
1-4 zones



WMMS-60CH-V2B(59)2  
2 to 5 zones

### Dimensions of Outdoor Units



Dim.	WMMS-30CH-V2B (59)2	WMMS-36CH-V2B(59)2	WMMS-42CH-V2B(59)2	WMMS-48CH-V2B(59)2	WMMS-60CH-V2B(59)2
A	5.8	6.25	6.25	7.6	7.75
B	21.7	22.75	22.75	22.5	24.75
C	5.8	6.25	6.25	7.3	7.75
E	13.5	13.5	13.5	13.5	16.9
W1	33.3	35.25	35.25	37.4	40.25
W0	35.3	37.25	37.25	39.4	42.25
H	23.5	27.6	27.6	27.5	43.5
D1	12.75	13.5	13.5	13.5	14.0
D0	15.0	15.75	15.75	15.75	17.5

## SPECIFICATIONS

Outdoor Unit Models	WMMS-30CH-V2B(59)2 (1 to 2)	WMMS-36CH-V2B(59)2 (1 to 3)	WMMS-42CH-V2B(59)2 (1 to 4)	WMMS-48CH-V2B(59)2 (1 to 4)	WMMS-60CH-V2B(59)2 (1 to 5)	
Power Supply						
208-230/1/60						
Cooling Capacity* (Btu/h)	Max. IDU Cap. Total 2)	30,000	36,000	48,000	57,000	72,000
	Rated 1)	18,000	24,000	28,000	30,000	42,000
	Min.	7,200	10,000	10,000	10,000	12,000
Total Power Input in Cooling Mode* (W)	Max.	2300	3300	4500	4500	5100
	Rated	1550	2250	2600	2600	3950
	Min.	650	800	900	1000	1200
SEER		16.0	16.0	16.0	16.0	16.0
HSPF		8.2	8.2	8.2	8.2	8.2
Heating Capacity* (Btu/h)	Max. IDU Cap. Total 2)	32,000	38,000	50,000	59,000	74,000
	Rated 1)	19,000	29,500	31,000	33,000	46,000
	Min.	6,500	9,000	9,000	9,000	10,000
Total Power Input in Heating Mode*	Max.	2400	3000	3500	3500	4800
	Rated	1750	2500	2920	2920	4400
	Min.	650	800	900	1000	1200
Liquid Valve Size		2 x 1/4"	3 x 1/4"	4 x 1/4"	4 x 1/4"	4 x 1/4" + 3/8"
Gas Valve Size		2 x 3/8"	3 x 3/8"	4 x 3/8"	4 x 3/8"	2x3/8"+2x1/2"+5/8"
Compressor Manufacturer/trademark		Sanyo / Mitsubishi / Others				
Compressor Oil		/ FV50S /	/ FV50S /	/ FV50S /	/ FV50S /	/ FV50S /
L.R.A. (A)		27	45	45	45	55
Compressor RLA (A)		8.4	9.7	9.7	10	13
Compressor Power Input (W)		1245	2200	2200	2200	3000
MCA (A)		15	20	20-All IDUs EW / 30-All IDUs EC or EU	30-All IDUs EW / 40-All IDUs EC or EU	40
Fuse or Circuit Breaker (HVAC Type)		30	30	30-All IDUs EW / 40-All IDUs EC or EU	40-All IDUs EW / 50-All IDUs EC or EU	40-All IDUs EW / 50-All IDUs EC or EU
Throttling Method		Electronic Expansion Valve				
Starting Method		Transducer starting				
Recommended Working Ambient Temp Ranges (F)		AC: 20 to 115 HP: 5 to 75				
Condenser		Aluminum fin-copper tube				
Output of Fan Motor (W)		60	60	60	60	140
Fan Motor RLA (A)		0.65	0.65	0.65	0.65	1.1
Fan Motor Capacitor (uF)		3	3.5	3.5	3.5	6
Air Flow Rate of Outdoor Unit		/	/	/	/	/
Fan Type-Piece		Axial fan 1	Axial fan 1	Axial fan 1	Axial fan 1	Axial fan 1
Fan Diameter (Inches)		18.1	18.1	18.1	18.1	22.5
Defrosting Method		Auto Defrost	Auto Defrost	Auto Defrost	Auto Defrost	Auto Defrost
Climate Type		T1	T1	T1	T1	T1
Isolation		I	I	I	I	I
Moisture Protection		IP24	IP24	IP24	IP24	IP24
Max. Operating Pressure at High Side (PSI)		550	550	550	550	550
Max. Operating Pressure at Low Side (PSI)		175	175	175	175	175
Sound Pressure Level dB (A) (H/L)		56/54	56/54	56/54	56/54	56/54
Sound Power Level dB (A) (H/L)		66/64	66/64	66/64	66/64	66/64
Dimensions of Outdoor Unit (W x H x D) (Inches)		33.3 x 27.0 x 11.8	37.4 X 27.5 X 15.5	37.2 X 27.6 X 15.75	37.4 X 27.5 X 15.5	42.25 X 43.5 X 17.5
Dimensions of Package (W x H x D) (Inches)		39.1 x 29.5 x 16.9	40.6 X 29.5 X 16.5	40.5 X 29.5 X 18.0	40.6 X 29.5 X 16.5	46.0 X 48.6 X 19.4
Net Weight /Gross Weight (LBs)		115 / 126	150 / 161	165 / 176	165 / 176	225 / 248
Refrigerant /Factory Pre-Charge for 25' (LBs)		R410A / 2.97	R410A / 4.84	R410A / 4.84	R410A / 4.84	R410A / 10.6
Loading Quantity	20' Container	87	80	80	80	50
	40' Container	183	170	170	170	100
	40' High Cube Container	183	170	170	170	100

### Important Notes

- The rated performance data printed on the unit nameplate are tested per AHRI 210/240 standards at standard indoor & outdoor conditions and standard installation set-up.
- Actually the DC inverter outdoor unit will modulate to match whatever capacity needs called/requested from indoor unit side, to produce a wide range of capacities, minimum could be about 15% of the rated number and maximum could be around 160% of the rated number.
- Once the DC inverter system is installed, each indoor unit's output and so the outdoor unit performance will all vary over the operation period: soft-starting, turbo quick cooling/heating, maintaining, defrosting, switching, and other condition changes.
- Actual performance varies upon many factors such as indoor and outdoor temperatures, inter-connecting pipe length/ bending, elevation difference between indoor and outdoor units, refrigerant charging level, vacuum level, leakage, air or moisture or contamination level, foreign substance left in the piping, indoor filter clean level, indoor and outdoor coil conditions, and other factors such as zoning factor ZR (=max. zone capacity sub-total / all zone capacity total).

# Symphony CHOIR-Multiple Zone (59)2S Outdoor Units 6-9 Zones

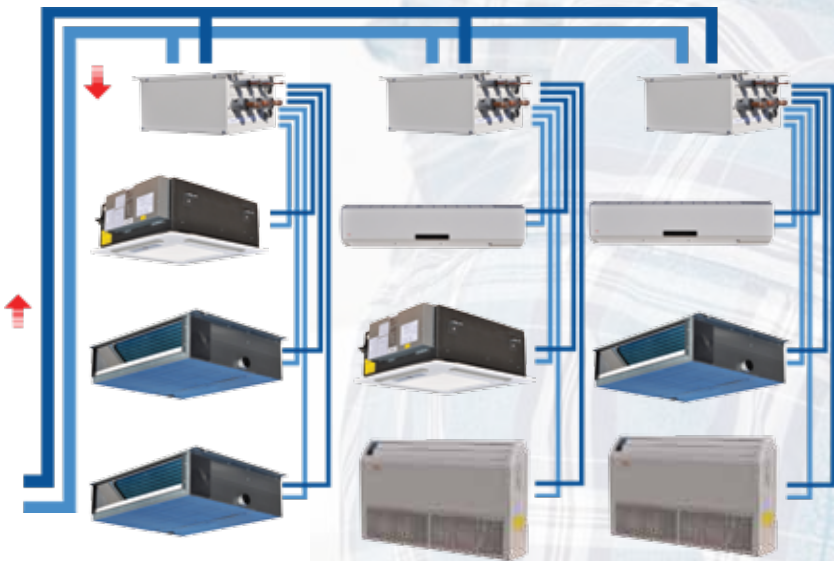


WMMS-80CH-V2B(59)2



WMMS-90CH-V2B(59)2

## SAMPLE INSTALLATION DIAGRAM



## SPECIFICATIONS

Model	-	WMMS-80CH-V2B(59)2	WMMS-90CH-V2B(59)2	Model	-	WMMS-80CH-V2B(59)2	WMMS-90CH-V2B(59)2
Allowed Capacity Rating Totals-All Indoor Units	Btu/h	86,000	98,000	Overload Protector	-	NO	NO
Cooling Capacity-Rating	Btu/h	47800.00	52900.00	Motor Full Load Amp(FLA)	A	1	2
Min. Cooling Capacity	Btu/h	3412.00	3412.00	Fan Motor Drive Type	-	Built-in driver	Built-in driver
Max. Cooling Capacity	Btu/h	54592.00	61416.00	Fan Motor Speed High to Low	RPM	784/680/576/480/384/280	864/760/608/464/352/280
Heating Capacity-Rating	Btu/h	54600.00	61400.00	Fan Motor Power Output	W	120W	120W
Min. Heating Capacity	Btu/h	4094.40	4094.40	Fan Motor Power Input	W	150W	150W
Max. Heating Capacity	Btu/h	59368.80	63122.00	Fan Motor Capacitor	µ F	NO	NO
EER	WW	2.80	2.77	Condenser Material	-	Copper tube-hydrophilic aluminum foil	
EER	Btu/h/W	9.56	9.45	Condenser Face Area	Sq.Ft	13.89	13.89
COP	Btu/h/W	12.41	11.81	Condenser Copper Pipe Diameter OD	Inch	5/16	5/16
SEER	Btu/h/W	16	11.81	Condenser Copper Pipe Rows	-	2	2
HSPF	Btu/h/W	8	8	Condenser Tube Pitch(a)*Row Pitch(b)	Inch	3/4*7/8	3/4*7/8
Air Flow Volume	CFM	3766.40	4119.50	Condenser Fin FPI	Fins	15	15
Sound Pressure Level Low-High	dB(A)	43-57	43-58	Condenser Fin Type	-	Wave	Wave
Sound Power Level Low-High	dB(A)	52-67	52-68	Condenser Fin Color	-	Blue	Blue
Rated Input Ele. Power Supply	V	208-230/1/60	208-230/1/60	Condenser Length (L) * Depty (D) * Hight (H)	Inch	27.3*11.3*52.0	27.3*11.3*52.0
Cross-sectional Area of Power Cable Conductor	mm <sup>2</sup>	6.00	6.00	Condenser Max. Allowable Pressure	PSI	623	623
Recommended Power Cable (Core)	N	3.00	3.00	Permissible Excessive Operating Pressure for the Discharge Side	PSI	580	580
Fuse Current	A	50	50	Permissible Excessive Operating Pressure for the Suction Side	PSI	145	145
HVAC Type Circuit Breaker	A	50	50	High Presser Overload Protector	PSI	542	542
Cooling Power Input	KW	5.00	5.60	Low Presser Overload Protector	PSI	23.2	23.2
Heating Power Input	KW	4.40	5.20	Cooling Operation Ambient Temperature Range	F	5 to 118	5 to 118
Rated Power Input	KW	5.60	6.50	Heating Operation Ambient Temperature Range	F	-4 to 75	-4 to 75
Cooling Current Input	AMP	23.00	25.00	Maximum IDU Qty.	Unit	8	9
Heating Current Input	AMP	20.00	22.50	Defrosting Method	-	Automatic defrosting	Automatic defrosting
Rated Current	AMP	28.00	28.00	Isolation	-	I	I
Starting Current	AMP	10	10	Moisture Protection	-	IPX4	IPX5
Compressor Make	-	Landa(LD)	Landa(LD)	Overload Protector	-	NO	NO
Compressor Model	-	QXAS-F428zX050A or Equivalent		Climate Type	-	T1	T2
Compressor Type1	-	Inverter Rotary	Inverter Rotary	Refrigerant	-	R410A	R410A
Compressor Capacity	Btu/h	46075	46076	Refrigerant Charge	LBs	10.9	10.9
Compressor Power Input	W	4580.00	4580.01	Metering Device	-	Electronic expansion valve	Electronic expansion valve
Compressor Rated Load Amp (RLA)	A	23.00	23.00	Dimension of Unit Net (W*D*H)	Inch	35.4*14.8* 53.1	35.4*14.8*53.1
Compressor Locked Rotor Amp (L.R.A)	A	-	-	Dimension of Carton Box (W*D*H)	Inch	38.6*17.3*54.4	38.6*17.3*54.4
Compressor Thermal Protector	-	NO	NO	Net Weight	LBs	256	256
Compressor Crankcase	W	40.00	40.00	Gross Weight	LBs	275	275
Compressor Refrigerant Oil Type	-	FV50S	FV50S	Outdoor Unit Loading Quantity( 20/40GP/40HQ Container )	Units	27/54/54	27/54/54
Compressor Refrigerant Oil Charge Volume	L	1.35	1.35	Ref. Valve Connection	-	Flare	Flare
Chassis Electrical Heater Power Input	W	140.00	140.00	Unit is Precharged for Maximum Pipe Length	Ft	null	null
Chassis Electrical Heater Current	A	0.6	0.6	Connection Pipe Gas Additional Charge	Oz/Ft	null	null
Fan Type	-	Axial-flow	Axial-flow	Connection Pipe Liquid Pipe Outer Diameter 1	Inch	3/8"	3/8"
Fan Quantity	-	2	2	Connection Pipe Gas Pipe Outer Diameter 1	Inch	3/4"	3/4"
Fan Diameter-height	mm	472-160	472-160	Recommended Elevation Difference Limit-Outdoor to Indoor Units	Ft	null1	null2
Motor Model	-	SWZ120A	SWZ120A	Recommended Elevation Difference Limit-Outdoor is Below Indoor Units	Ft	null3	null4
Motor Type	-	DC Motor	DC Motor	Recommended Elevation Difference Limit-Outdoor is Above Indoor Units	Ft	null5	null6
Motor Insulation Class	-	B	B	Max. Equivalent Copper Pipe Length (Outdoor Unit to the Farthest Indoor Unit)	Ft	null7	null8
Motor Safe Class	-	IP44	IP45	Max. Total Length of All Copper Pipe Lines	Ft	null9	null10

## Important Notes About the DC Inverter Systems Performance

1. The rated performance data printed on the nameplate were tested per AHRI 210/240 standards at standard indoor and outdoor conditions and standard installation set-up.
2. Actually the DC inverter outdoor unit could modulate to match whatever capacity needs are called/requested from indoor side, to produce a wide range of capacities, minimum could be about 15% of the rated number and maximum could be around 160% of the rated number.
3. Once the DC inverter system is installed, each indoor unit's output and so the outdoor unit performance will all vary over the operation period: soft-starting, turbo quick cooling/heating, maintaining, defrosting, switching, and other condition changes.
4. Actual performance varies upon many factors such as indoor and outdoor temperatures, inter-connecting pipe length/bending, elevation difference between indoor and outdoor units, refrigerant charging level, vacuum level, leakage, air or moisture or contamination level, foreign substance left in the piping, indoor filter clean level, indoor and outdoor coil conditions, and other factors.



# YMGI, Engineered Comfort

## Products for a Sustainable & Green World

### APPLICATIONS:

- LIBRARIES
- HOTELS
- HOMES
- SUNROOMS
- CONDOS
- RESORTS
- GALLERIES
- NURSING HOMES
- APARTMENTS
- OFFICES
- RESTAURANTS
- MOBILE HOMES

### FEATURES:

- DC INVERTER
- ADAPTIVE SMART CONTROL
- HIGH EFFICIENCY
- QUICK COOLING AND HEATING
- INDEPENDENT DEHUMIDIFICATION
- INTELLIGENT DEFROSTING
- QUIET OPERATION
- SOFT START
- LOW VOLTAGE START
- STABLE OPERATION AT LOW FREQUENCY
- RANDOM PITCH CROSS FLOW FAN WHEEL
- WIDE ANGLE AIR DISTRIBUTION
- LONG AIR THROW
- WASHABLE FILTER
- AUTO DRYING & CLEANING
- DRY ANTI-MOLD COIL
- REMOTE CONTROL
- 12 OR 24-HOUR TIMER
- MEMORIES & AUTO RESTART
- PRE-HEATING PRIOR TO HEATING START
- OVERCORRECT & THERMAL PROTECTION
- SLEEP MODE
- ENHANCED COPPER/COIL
- PRE-CHARGED
- DIGITAL DISPLAY (LIGHT ON/OFF)
- EASY OPERATION
- EASY DIAGNOSIS & TROUBLE-SHOOTING
- THOROUGHLY TESTED
- RELIABLE QUALITY

### ADD-ON ACCESSORIES:

- ADVANCED HEALTHY KIT  
HEPA/Enzyme/  
Cold Catalyst Filter  
Anion Generator
- "U-TOUCH" REMOTE CONTROL
- REMOTE CONTROL LOCK
- BRACKETS (FOR OUTDOOR UNIT)
- FOOT RISERS (FOR OUTDOOR UNIT)
- COPPER/WIRE/ACC.SET (ACC. KIT)
- LINESET COVERS
- WINTER WIND BAFFLE

### Important Notes:

- In DC inverter multiple zone system, not all indoor units will need to work at rated capacity all the time. Zoning capability of mini split multiple system is one of the reasons it has higher energy efficiency than central system.
- Instructions for selecting multiple-zone indoor and outdoor unit models, following these steps in a sequence:
  - The installing HVAC contractor checks job site, collects all info, and uses commercially available cooling/heating load calculation program such as Wrightsoft Manual J to calculate each room's design cooling load and design heating load.
  - Select the unit model of the most closest standard rating for each room. Keep in mind: HVAC equipment's cooling capacity/efficiency drops as ambient temperature rises, while its heating output capacity/efficiency drops as ambient temperature drops. Need to select a 2nd source heater as back-up heating to make up or replace heat pump during some cold hours when heat pump is not able to generate enough heat.
  - Divide all rooms into # of thermal zones. In each thermal zone, all indoor units will be used working at standard capacity ratings most of time.
  - Add up all the standard rating capacities of all indoor units in each thermal zone, and then find out the largest Zone Sub-total capacity.

### SAMPLE SIZE COMBINATIONS AND PERFORMANCE DATA

WMMS-30CH-V2B(59)2 Cooling Performance Nominal Data								WMMS-30CH-V2B(59)2 Heating Performance Nominal Data							
Indoor Unit Combinations	Total Capacity	Room A	Room B	Room C	Room D	Capacity Rating-Btu/h (Min.-Max.)	Input Power Rating-Watts (Min.-Max.)	Indoor Unit Combinations	Total Capacity	Room A	Room B	Room C	Room D	Capacity Rating-Btu/h (Min.-Max.)	Input Power Rating-W (Min.-Max.)
9K	9K	10880				10880 (9180-12240)	1050 (1000-1300)	9K	9K		9860			9860 (6630-15980)	1100 (850-2450)
12K	12K	11900				11900 (9180-14960)	1050 (1000-1500)	12K	12K			13260		13260 (6800-17000)	1450 (850-2500)
18K	18K	17000				17000 (11220-22780)	1400 (1000-2600)	18K	18K	19720				19720 (8670-27880)	1850 (900-2950)
9+9K	18K	8500	8500			17000 (11220-22780)	1400 (1000-2600)	9+9K	18K	10880	10880			21760 (8670-29240)	2050 (900-2950)
9+12K	21K	8500	11900			20400 (11220-26520)	1800 (1000-3300)	9+12K	21K	10880	13600			24480 (8670-30600)	2300 (900-3300)
12+12K	24K	11900	11900			23800 (11220-27880)	2300 (1000-3800)	12+12K	24K	13260	13260			26520 (10200-32640)	2400 (900-3500)
9+18K	27K	8840	15300			24140 (11220-32300)	2200 (1000-4600)	9+18K	27K	12240	17000			26860 (10200-31620)	2400 (900-3500)
12+18K	30K	11900	12240			24140 (11220-32300)	2200 (1000-4600)	12+18K	30K	12240	15300			27540 (10540-33660)	

WMMS-36CH-V2B(59)2 Cooling Performance Nominal Data								WMMS-36CH-V2B(59)2 Heating Performance Nominal Data							
Indoor Unit Combinations	Total Capacity	Room A	Room B	Room C	Room D	Capacity Rating-Btu/h (Min.-Max.)	Input Power Rating-Watts (Min.-Max.)	Indoor Unit Combinations	Total Capacity	Room A	Room B	Room C	Room D	Capacity Rating-Btu/h (Min.-Max.)	Input Power Rating-W (Min.-Max.)
9+9K	18K	8500	8500			17000 (11220-22780)	1400 (1000-2600)	9+9K	18K	10880	10880			21760 (8670-29240)	2050 (900-2950)
9+12K	21K	8500	11900			20400 (11220-26520)	1800 (1000-3300)	9+12K	21K	10880	13600			24480 (8670-30600)	2300 (900-3300)
12+12K	24K	11900	11900			23800 (11220-27880)	2300 (1000-3800)	12+12K	24K	13260	13260			26520 (10200-32640)	2400 (900-3500)
9+18K	27K	8840	15300			24140 (11220-32300)	2200 (1000-4600)	9+18K	27K	12240	17000			26860 (10200-31620)	2400 (900-3500)
12+18K	30K	11900	12240			24140 (11220-32300)	2200 (1000-4600)	12+18K	30K	12240	15300			27540 (10540-33660)	2600 (900-3800)
9+9+9K	27K	8075	8075	8075		24140 (11220-32300)	2200 (1000-4600)	9+9+9K	27K	9632	9632	9632		28900 (10540-37400)	2600 (900-3800)
9+9+12K	30K	7140	7140	9860		24140 (11220-32300)	2200 (1000-4600)	9+9+12K	30K	9010	9010	10880		28900 (10540-37400)	2600 (900-3800)
9+12+12K	33K	6460	8840	8840		24140 (11220-32640)	2200 (1000-4650)	9+12+12K	33K	7820	10880	10880		29580 (10540-37400)	2600 (900-3800)
12+12+12K	36K	8075	8075	8075		24140 (11220-32640)	2200 (1000-4650)	9+9+18K	36K	7990	7990	13600		29580 (10540-37400)	2400 (1000-3900)
9+9+18K	36K	7480	7480	9180		24140 (11220-32640)	2200 (1000-4650)	12+12+12K	36K	9860	9860	9860		29580 (10540-37400)	2350 (1000-4000)
9+12+18K	39K	7140	7820	9180		24140 (11220-32640)	2200 (1000-4650)	9+12+18K	39K	7480	9180	12920		29580 (10540-37400)	2350 (1000-4000)
12+12+18K	42K	7820	7820	8500		24140 (11220-32640)	2200 (1000-4650)	12+12+18K	42K	8500	8500	12580		29580 (10540-37400)	2400 (1000-4000)

WMMS-42CH-V2B(59)2 Cooling Performance Nominal Data								WMMS-42CH-V2B(59)2 Heating Performance Nominal Data							
Indoor Unit Combinations	Total Capacity	Room A	Room B	Room C	Room D	Capacity Rating-Btu/h (Min.-Max.)	Input Power Rating-Watts (Min.-Max.)	Indoor Unit Combinations	Total Capacity	Room A	Room B	Room C	Room D	Capacity Rating-Btu/h (Min.-Max.)	Input Power Rating-W (Min.-Max.)
9+9K	18K	8500	8500			10880 (9180-12240)	1400 (1000-2600)	9+9K	18K	10880	10880			21760 (8670-27880)	2050 (900-2950)
9+12K	21K	8500	11900			11900 (9180-14960)	1800 (1000-3300)	9+12K	21K	10880	13600			24480 (8670-28900)	2300 (900-3300)
12+12K	24K	11900	11900			20400 (11220-26520)	2200 (1000-4600)	12+12K	24K	13260	13260			27540 (10540-33660)	2400 (900-3500)
9+18K	27K	8840	15300			17000 (11220-22780)	2300 (1000-3800)	9+18K	27K	9860	17000			26520 (10200-31620)	2400 (900-3500)
12+18K	30K	11900	12240			17000 (11220-22780)	2200 (1000-4600)	12+18K	30K	12240	15300			26860 (10200-31620)	2400 (1000-3900)
9+9+9K	27K	8044	8044	8044		23800 (11220-27880)	2200 (1000-4600)	9+9+9K	27K	9180	9180	9180		27540 (10540-33660)	2400 (1000-4000)
9+9+12K	30K	7140	7140	9860		24140 (11220-32300)	2200 (1000-4600)	9+9+12K	30K	8500	8500	10540		27540 (10540-33660)	2400 (1000-4000)
9+12+12K	33K	6460	8840	8840		24140 (11220-32300)	2200 (1000-4650)	9+12+12K	33K	7480	10370	10370		28220 (10540-33660)	2450 (1000-4000)
12+12+12K	36K	8044	8044	8044		24140 (11220-32300)	2200 (1000-4650)	9+9+18K	36K	7990	7990	11560		27540 (10540-33660)	2400 (1000-4000)
9+9+18K	36K	7480	7480	9180		24140 (11220-32300)	2200 (1000-4650)	12+12+12K	36K	9690	9690	9690		29070 (10540-33660)	2500 (1000-4000)
9+12+18K	39K	7140	7820	9180		24140 (11220-32640)	2200 (1000-4650)	9+12+18K	39K	7480	9180	10880		27540 (10540-33660)	2400 (1000-4000)
12+12+18K	42K	7820	7820	8500		24140 (11220-32640)	2200 (1000-4650)	12+12+18K	42K	8500	8500	10540		27540 (10540-33660)	2400 (1000-4000)
9+9+9+9K	36K	6800	6800	6800	6800	24140 (11220-32640)	2480 (1000-4650)	9+9+9+9K	36K	8160	8160	8160	8160	32640 (11220-37400)	2600 (1100-4200)
9+9+9+12K	39K	1750	1750	1750	2750	24140 (11220-32640)	2480 (1000-4650)	9+9+9+12K	39K	7480	7480	7480	10200	32640 (11220-37400)	2600 (1100-4200)
9+9+12+12K	42K	1500	1500	2500	2500	24140 (11220-32640)	2480 (1000-4700)	9+9+12+12K	42K	7140	7140	9180	9180	32640 (11220-37400)	2600 (1100-4200)
9+12+12+12K	45K	1700	2100	2100	2100	27200 (11220-32640)	2480 (1000-4700)	9+12+12+12K	45K	6120	8840	8840	8840	32640 (11220-37400)	2600 (1100-4200)

### Important Notes:

- In DC inverter multiple zone system, is one of the reasons it has higher energy efficiency than central system.
- A. The installing HVAC contractor checks job site, collects all info, and uses commercially available cooling/heating load calculation program such as Wrightsoft Manual J to calculate each room's design cooling load and design heating load.  
B. Select the unit model of the most closest standard rating for each room. Keep in mind: HVAC equipment's cooling capacity/efficiency drops as ambient temperature rises, while its heating output capacity/efficiency drops as ambient temperature drops. Need to select a 2nd source heater as back-up heating to make up or replace heat pump during some cold hours when heat pump is not able to generate enough heat.  
C. Divide all rooms into # of thermal zones. In each thermal zone, all indoor units will be used working at standard capacity ratings most of time.  
D. Add up all the standard rating capacities of all indoor units in each thermal zone, and then find out the largest Zone Sub-total capacity.  
E. Then use the Sub-total capacity found in step D to match outdoor unit model that has the closest stand rating capacity.  
**Example 1:** A remodeling house project has 4 rooms A, B, C, D.  
Zone1: A 17,200 Btu/h design load pick 18K indoor unit, B 10,400 Btu/h design load pick 12K indoor unit, Sub-total for zone 1=18K+12K=30K.  
Zone 2: C 9,100 Btu/h design load pick 09K indoor unit, D 12,800 Btu/h design load pick 12K indoor unit, Sub-total for zone 2=9K+12K=21K.  
30K>21K, so outdoor unit WMMS-48CH-V2B(59)2 is the 1st choice and WMMS-42CH-V2B(59)2 the 2nd if pipes are less than 4x25'=100ft.  
**Example 2:** If all indoor units need to run at rating capacities ALL THE TIME(A,B,C,D are in one zone), then WMMS-60CH-V2B(59)2 should be selected.  
3. All indoor units must work in same thermal mode. Shall not run cooling in one unit and heating in another one, or mode conflict error code E7 shows up.

# THE YMGi ADVANTAGE

## Ease of Installation

Easier to install than central systems, the hook-up between the mini split outdoor and indoor units generally requires only a three-inch hole through a wall for the conduit that contain the condensate drain hose, wires and refrigeration pipes. The outdoor unit can be located up to 150 feet from the indoor unit, making it possible to place the condensing unit where it can't be seen.

Mini split outdoor condensing units are designed to be installed anywhere central air conditioners or heat pumps can be installed. They can also be hung on a wall, placed on a balcony, below a deck, in a garage, and several places where a central air conditioner would be impossible to fit.

Professionally trained YMGi-certified technicians can properly install your mini split system, ensuring your system operates quietly and as efficiently as possible, providing you with a lifetime with worry-free comfort.



## Technical Support

YMGi offers full technical support for all the heating and cooling systems. If you have any questions about the operation of your unit, you can find answers in your owner's manuals. It will help you understand unit operation, various functions, and proper operation and maintenance of your system.

If for any reason your unit is not operating properly, shut the system down and call your HVAC service technician. If your HVAC technician has any questions, or is in need of help, they can get the unit model and and contact our technical support line at **866-833-3138 ext.703**. This information will help us provide the quickest, most accurate, and most economical diagnosis possible.

## Customer Service

When you or your technician calls YMGi hot lines, you will always talk to a live person. Along with our commitment to quality, customer service is the most important part of our business. Our goal is to meet and exceed your expectations, going above and beyond to earn your trust and loyalty. We view each of our customers as partners.

**YMGi Group**, POB 1559  
**YMGi HVAC & Solar Supply**, POB 1668  
O'Fallon, Missouri 63366, USA  
Phone: 1-866-833-3138  
Fax: 1-866-377-3355

**Sales:**  
sales@ymgigroup.com  
**Technical Support:**  
techsp@ymgigroup.com  
**Service & Warranty:**  
customerservice@ymgigroup.com

## Warranty Overview

If you aren't satisfied, neither are we. Proper installation matters a lot to the performance and lifetime of your unit. Hiring a qualified HVAC installer is the first step of all.

For specific warranty inquiries, please refer to the contact information in the customer service section of this catalog. If for any reason you do not receive a prompt response, you can call our 7/24-hour toll free number at **1-866-833-3138 ext.704** or email to us at **customerservice@ymgigroup.com**. Please include a copy of each your purchase invoice number, contractor installation invoice, unit model number and serial number, a full description of your problem and any pictures or information that will help us resolve your problem as quickly as possible.

## Credentials & Certification

All YMGi systems are ETL listed in both the U.S. and Canada. They are also certified by the AHRI and ENERGY STAR® to far exceed the current world standards for energy efficiency

## Tax Credits

When purchasing your YMGi Symphony Series DC inverter products of high energy efficiency, system don't forget to take advantage of any and all available federal tax credits. Many states and utility companies offer tax incentives, too. Be sure to check what is available in your area.

## Quality & More

### Stylish Looks

YMGi units have clean, modern styling and complement any décor.

### Thoroughly Tested Before Packaging

All YMGi systems are tested one by one and are packaged only after all safety, operational functions, features and cosmetic details have been checked. All products must meet or exceed our strict quality control tests following standards that are the highest of the industry.

### Reliable Quality

YMGi products are designed using the latest technology and always keep the end user in mind. Using only highest quality parts, including a rust-free cabinet each YMGi unit is built to last. Best of all, every YMGi system is backed by our 100% engineered technical support and trouble-shooting guidance.

## ENERGY STAR®

ENERGY STAR® is the trusted, government-backed symbol for energy efficiency established to help certify energy-efficient products and practices. The ENERGY STAR label was established to reduce greenhouse gas emissions and make it easier for consumers to identify and purchase energy-efficient products that offer savings on energy bills without sacrificing performance, features, or comfort.

Our DC INVERTER system along with many other YMGi products, are ENERGY STAR® qualified with up to a 22SEER rating or higher. The Energy Star label guarantees a product meets or exceeds the energy efficiency specifications and testing requirements of the ENERGY STAR® program.

