R32

MULTI V™ S

WITH

LGRED°

OUTDOOR UNIT ENGINEERING MANUAL

Variable Refrigerant Flow
Heat Pump Outdoor Unit
2.0 Tons

Variable Refrigerant Flow Combination
(Heat Pump or Heat Recovery) Outdoor Units
3.0, 4.0, and 5 Tons

PROPRIETARY DATA NOTICE

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A summary list of safety precautions is on page 4.

For more technical materials such as submittals, catalogs, installation, owner's, and service manuals, visit www.lghvac.com.

Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR® criteria. Ask your contractor for details or visit www.energystar.gov.

(ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.)

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	*Indicates that this appliance uses a flammable refrigerant. If the refrigerant leaks and is exposed to an external ignition source, there is a risk of fire.*
⚠ DANGER	*Indicates a hazardous situation that, if not avoided, WILL RESULT IN DEATH OR SERIOUS INJURY.[1]*
⚠ WARNING	*Indicates a hazardous situation that, if not avoided, COULD RESULT IN DEATH OR SERIOUS INJURY.[1]*
⚠ CAUTION	*Indicates a hazardous situation that, if not avoided, COULD RESULT IN MINOR OR MODERATE INJURY.[1]*
NOTICE	*Indicates information considered important, but not hazard-related; indicates situations that may result in equipment or property damage accidents.[1]*
	*This symbol indicates an action that should not be performed.*

[1]Signal words, symbols, and definitions taken from American National Standards Institute (ANSI) Z535.6. See https://www.ansi.org/ for more information.

R32 Refrigerant

LG Electronic split system heating and air conditioning (HVAC) products now contain R32 refrigerant. While R32 refrigerant is slightly flammable, it has a higher efficiency, a lower Global Warming Potential (GWP) value, and is more environmentally friendly than R410A.
R32 Ozone Depletion Potential (ODP) Value: 0.
R32 Global Warming Potential (GWP) Value: 675.

The amount of refrigerant depends on outdoor unit to indoor unit configuration. All refrigerant piping system components (copper piping, joints, and other fittings) must be selected and installed to conform with Refrigeration Safety Regulation standards. Use LG Air Conditioner Technical Solution (LATS) Software to verify the refrigerant amount needed for each installation.

⚠ WARNING

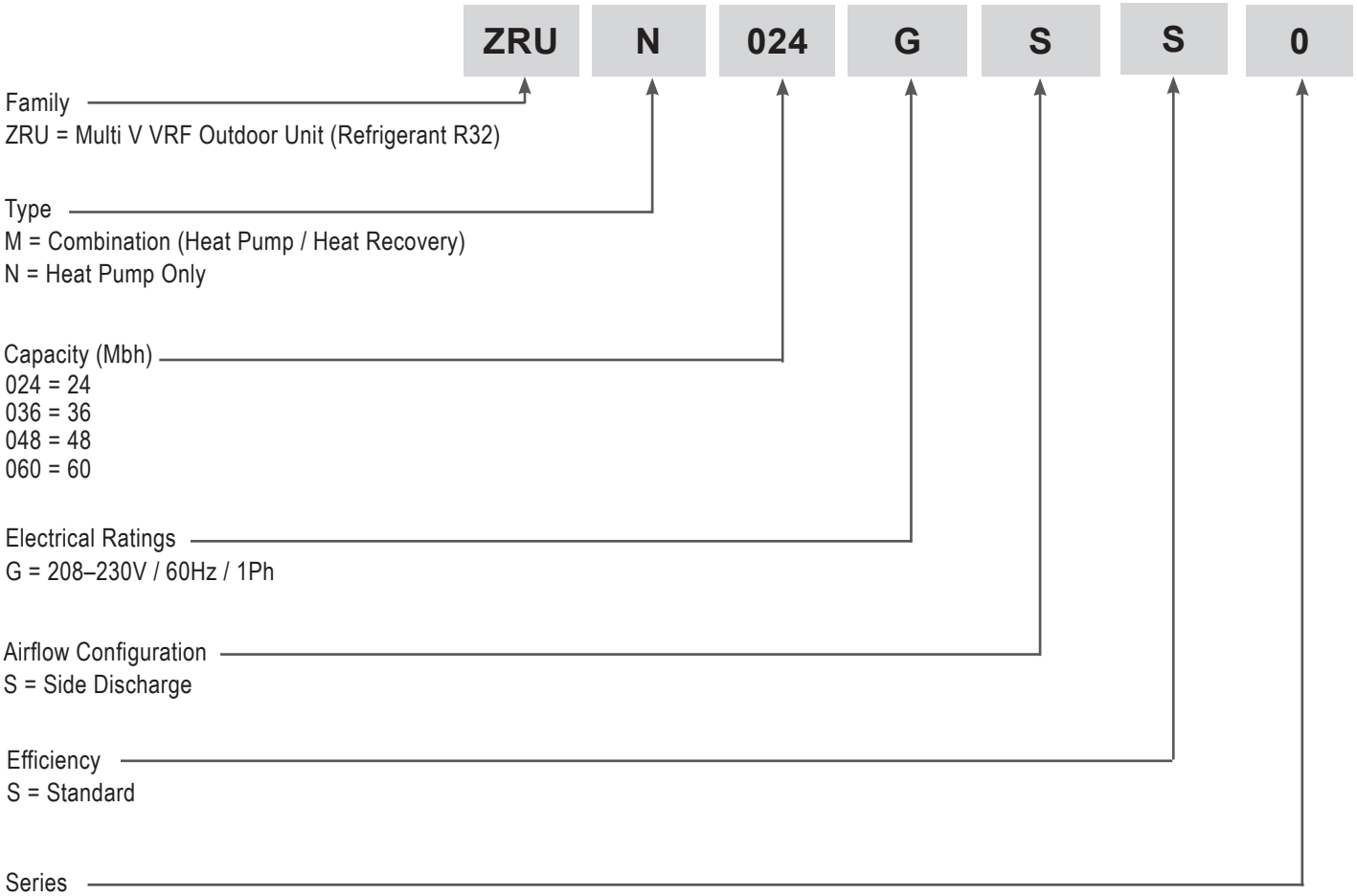
- *This HVAC system contains fluorinated greenhouse gases in the form of R32 refrigerant. ⃠ Do not leak refrigerant gas into the atmosphere.*
- *Only use R32 as the refrigerant in these HVAC systems. If other substances are added, it may cause an explosion.*
- *R32 refrigerant is slightly flammable. When handled properly, it does not leak. If the refrigerant leaks in the installation area and comes in contact with a flame, it may generate a fire and / or harmful gas.*
- *If a leak occurs, immediately turn off any combustion devices, ventilate the installation area, and contact the dealer / contractor where the HVAC unit was purchased. ⃠ Do not operate the unit until the refrigerant leaked is repaired.*

⚠ CAUTION

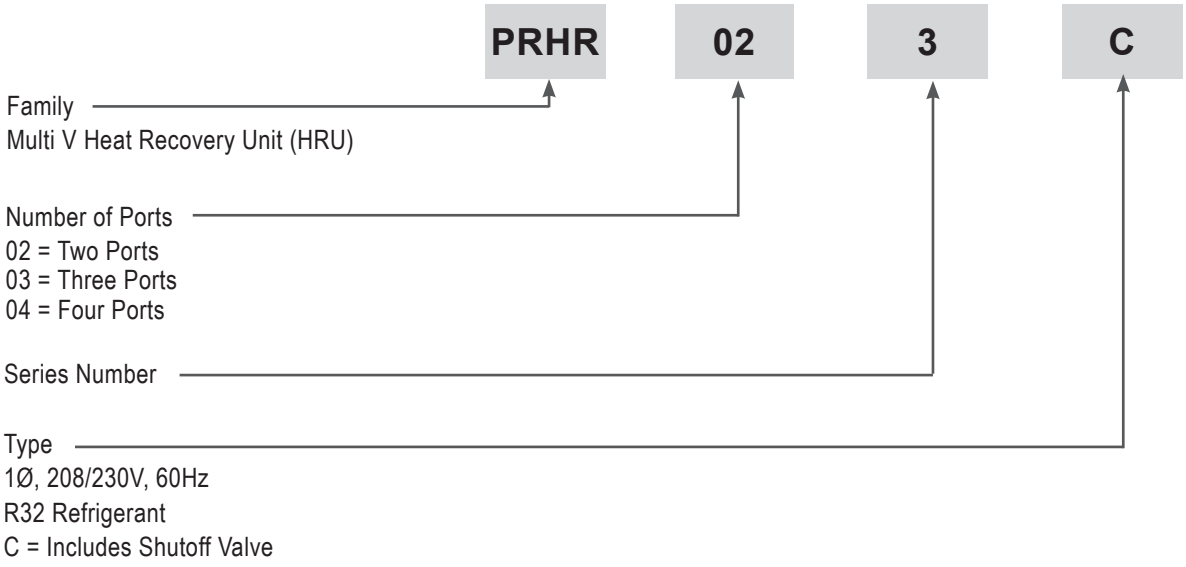
- *Piping wall thickness must comply with all applicable local, state, and federal regulations for the design pressures listed by the manufacturer. ⃠ Unapproved piping must not be used.*
- *To prevent piping from softening, ⃠ do not heat the piping more than necessary.*

NOMENCLATURE

Outdoor Units (ODU)



Heat Recovery Units (HRU)



LG AIR CONDITIONER TECHNICAL SOLUTION (LATS)

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LG Air Conditioner Technical Solution (LATS) Software

A properly designed and installed refrigerant piping system is critical to the optimal performance of LG air-conditioning systems. To assist engineers, LG offers, free of charge, LG Air Conditioner Technical Solution (LATS) software—a total design solution for LG air conditioning systems. Contact your LG Rep for the best software program for your application.

NOTICE

To reduce the risk of designing an improper applied system or one that will not operate correctly, LG requires that LATS software be used on all projects.

Figure 1: LATS Example (Tree Diagram; Illustrative Purposes Only. System will Vary Depending On Model).

Formats

LATS is available to LG customers in two user interfaces: LATS HVAC and LATS Revit. Both LATS formats are available through www.myLGHVAC.com, or contact an LG Sales Representative.

LATS HVAC is a Windows®-based application that aids engineers in designing LG Variable Refrigerant Flow (VRF), Multi F / Multi F MAX, Single-Zone, DOAS, and Energy Recovery Ventilator (ERV) systems.

**Windows® is a registered mark of Microsoft® Corporation.*

LATS Revit integrates the LG LATS program with Revit® software**. It permits engineers to layout and validate LG VRF, Multi F / Multi F MAX, Single-Zone, and DOAS directly into Revit drawings.

***Revit® is a registered mark of Autodesk, Inc.*

Features

All LG product design criteria have been loaded into the program, making LATS simple to use: double click or drag and drop the component choices. Build systems in Tree Mode where the refrigerant system can be viewed. Switch to a Schematic diagram to see the electrical and communications wiring.

LATS software permits the user to input region data, indoor and outdoor design temperatures, modify humidity default values, zoning, specify type and size of outdoor units and indoor units, and input air flow and external static pressure (ESP) for ducted indoor units.

The program can also:

- Import building loads from a separate Excel file.
- Present options for outdoor unit auto selection.
- Automatically calculate component capacity based on design conditions for the chosen region.
- Verify if the height differences between the various system components are within system limits.
- Provide the correct size of each refrigerant piping segment and LG Y-Branches and Headers.
- Adjust overall piping system length when elbows are added.
- Check for component piping limitations and flag if any parameters are broken.
- Factor operation and capacity for defrost operation.
- Calculate refrigerant charge, noting any additional trim charge.
- Suggest accessories for indoor units and outdoor units.
- Run system simulation.

NOTICE

Features depend on which LATS program is being used, and the type of system being designed. Contact your LG representative for the best software program for your application.

NOTICE

Any field changes, such as re-routing, shortening or lengthening a pipe segment, adding or eliminating elbows and/or fittings, re-sizing, adding, or eliminating indoor units, changing the mounting height, or moving the location of a device or fitting during installation must be done with caution and ALWAYS VERIFIED in LATS SOFTWARE BEFORE supplies are purchased or installed. Doing so will lead to a more profitable installation, reduce the potential for rework, and will reduce the potential for multiple visits to the job site to complete the system set up.

LG

LATS Generates a Complete Project Report

LATS software also generates a report containing project design parameters, cooling and heating design data, system component performance, and capacity data. The report includes system combination ratio and refrigerant charge calculations; and provides detailed bill of material, including outdoor units, indoor units, control devices, accessories, refrigerant pipe sizes segregated by building, by system, by pipe size, and by pipe segments. LATS can generate an Excel GERP report that can be imported into the LG SOPS pricing and ordering system.

Proper Design to Install Procedure

LG encourages a two report design-to-install-procedure. After the design engineer determines building / zone loads and other details, the engineer opens the LATS program and inputs the project's information. When the design is complete, the "Auto Piping" and "System Check" functions must be used to verify piping sizes, limitations, and if any design errors are present. If errors are found, engineers must adjust the design, and run Auto Piping and System Check again. When the design passes the checks, then the engineer prints out a project "Shop Drawing" (LATS Tree Diagram) and provides it to the installing contractor. The contractor must follow the LATS Tree Diagram when building the piping system, but oftentimes the design changes on the building site:

- Architect has changed location and/or purpose of room(s).
- Outdoor unit cannot be placed where originally intended.
- Structural elements prevent routing the piping as planned.
- Air conditioning system conflicts with other building systems (plumbing, gas lines, etc.).

The contractor must mark any deviation from the design on the Shop Drawing, including as-built straight lines and elbows. This "Mark Up" drawing must be returned to the design engineer or Rep, who must input contractor changes into the LATS file. (Copy the original LATS software file, save and rename as a separate file, and modify all piping lengths by double-clicking on each length and editing information.) Like the shop drawing, the Auto Piping and System Check must also be run on this new "As Built" drawing. The design engineer or Rep must then provide the final As Built file to the contractor. The Mark Up version must be compared to the As Built version for:

- Differences in pipe diameter(s). If incorrect diameters have been installed, the piping must be changed out. If pipe diameters have changed, check if Y-Branches will also need to be changed.
- Changes to outdoor unit and indoor unit capacities. Capacities changes will impact line length changes.
- Additional refrigerant charge quantity ("Trim Charge"). Trim charge will change if piping lengths and diameters change. The As Built version must reflect installed piping lengths to ensure correct trim charge.

All documents submitted by the contractor, as well as the Shop Drawing and the As Built Drawing files must be provided for commissioning purposes. Model and serial numbers for all system components must also be submitted. If the steps previously detailed are not followed, and all documents are not provided to the commissioning agent, the project runs the risk of not being commissioned and voiding any limited warranty LG offers on the equipment.

NOTICE

Any field changes, such as re-routing, shortening or lengthening a pipe segment, adding or eliminating elbows and/or fittings, re-sizing, adding, or eliminating indoor units, changing the mounting height, or moving the location of a device or fitting during installation must be done with caution and ALWAYS VERIFIED in LATS SOFTWARE BEFORE supplies are purchased or installed. Doing so will lead to a more profitable installation, reduce the potential for rework, and will reduce the potential for multiple visits to the job site to complete the system commissioning.

HEAT PUMP ODU PRODUCT DATA

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Multi V S with LGRED° Heat Pump Only Outdoor Units

General

LG Multi V S with LGRED Variable Refrigerant Flow (VRF) 24,000 Btu/h outdoor unit operates as a Heat Pump system. The outdoor unit is connected to the indoor units with a single refrigerant piping system using factory designed and supplied Y-branches, Headers, and has integrated controls. The system is capable of being designed for minimum piping and maximum design flexibility.

LG components are manufactured in a facility registered to ISO 9001 and ISO 14001, which is a set of standards applying to environmental protection set by the International Organization for Standardization (ISO). The units are Electrical Testing Laboratories (ETL) listed and bear the ETL label. All internal wiring is in accordance with the National Electrical Code (NEC).

Temperature Ranges

Multi V S with LGRED 24,000 Btu/h systems can operate in heating only mode (i.e., all indoor units in heating mode) from -13°F to 61°F outdoor ambient wet bulb. Heat Pump systems can operate in cooling mode from 23°F to 122°F outdoor ambient dry bulb. Optional low ambient cooling kit extends the cooling only operating range (i.e., all indoor units in cooling mode) down to -9.9°F.

Casing / Frame

Outdoor units are constructed with galvanized enamel paint. Each frame has a removable inspection panel to allow access to service tool connection, DIP switches, auto addressing, and error code display without removing the entire front panel. The entire front panel of the outdoor unit is removable for maintenance. Outdoor unit frames are completely factory assembled, piped and wired. Outdoor unit includes a built-in base pan heater.

Refrigerant System

The refrigeration system consists of a single refrigeration circuit and uses R32 refrigerant. The outdoor unit is provided with factory installed components, including a refrigerant strainer, check valves, oil separator, accumulator, four-way reversing valve, electronic controlled expansion valve (EEV), high and low side charging ports, high pressure safety switch, service valves, and interconnecting piping. Also included is an integral subcooler assembly consisting of a double spiral tube type subcooling heat exchanger and EEV providing refrigerant subcooling modulation up to 23ºF.

Compressors

All 1-phase 24,000 Btu/h outdoor unit frames are equipped with one hermetic digitally controlled inverter driven scroll compressor to modulated capacity (variable from 10 to 150Hz, modulate in 1.0 Hz increments).

Outdoor Unit Coil

The outdoor unit coils are of a nonferrous construction with louvered aluminum fins on copper tubing, and are protected by a metal guard. Coil fins have a factory applied corrosion resistant Black Coated Fin™ and hydrophilic coating.

Fans and Motors

Outdoor unit frames include one direct drive, variable speed propeller type fan. All fan motors have inherent protection, permanently lubricated bearings, and are variable speed with a maximum speed up to 850 rpm for cooling and 850 rpm for heating. Raised guards are provided to limit contact with moving parts. Outdoor units have horizontal discharge airflow.

Figure 2: ZRUN024GSS0 Heat Pump Outdoor Unit.

Electrical

Outdoor units are available in 208-230V 60Hz, 1-phase power supply. The units include over/under-voltage protection.

Controls

Outdoor units are factory wired with necessary electrical control components, integral microprocessors, printed circuit boards, thermistors, sensors, terminal blocks, and power lugs. The control circuit between the indoor units, heat recovery unit(s) (heat recovery systems only) and the outdoor unit is an RS-485 daisy chain communication bus. The cable is two conductor, twisted, stranded and shielded, 18 AWG. Microprocessor-based algorithms provide component protection, soft-start capability, refrigeration system pressure, temperature, defrost, and ambient control.

Refrigerant Leak Detector

Multi V indoor units have a built-in leak detector sensor to detect any refrigerant leaks.

Shut-off Valve

LG single port shutoff valve (PRHPZ010A; sold separately) is available as an accessory.

GENERAL DATA

Table 1: Heat Pump Only Specifications.

Model Number		2.0 Ton ZRUN024GSS0
Cooling Performance		
Rated Cooling Capacity (Btu/h)[1]		24,000
Heating Performance		
Rated Heating Capacity (Btu/h)[1]		27,000
ENERGY STAR / Cold Climate		Yes / Yes
Operating Range		
Cooling (°F DB)[2]		23 to 122
Heating (°F WB)		-13 to +61
Compressor		
Inverter Type / Quantity		Hermetically Sealed Scroll / 1
Oil / Type		PVE / FW68L
Fan (Side Discharge)		
Type		Propeller
Motor Output (kW) x Qty.		0.124 x 1
Motor / Drive		Brushless Digitally Controlled / Direct
Operating Range (RPM)	Cooling	0 to 850
	Heating	0 to 850
Maximum Air Volume (CFM)		2,119
Unit Data		
Refrigerant Type		R32
Refrigerant Control/Location		EEV / Indoor Unit
Max. Number Indoor Units / System[3]		4
Sound Pressure dB(A)[4] (Cooling / Heating)		50 / 52
Net Unit Weight (lbs.)		148
Shipping Weight (lbs.)		167
Communication Cables[5,6]		2 x 18
External Static Pressure (in. w.g.)		0.08
Heat Exchanger		
Material and Fin Coating		Copper Tube / Aluminum Fin and Black Coated Fin™ / Hydrophilic
Rows / Fins per inch		2 / 14
Piping[7]		
Liquid Line Connection (in., OD)		3/8 Flare
Vapor Line Connection (in., OD)		5/8 Flare
Factory Charge lbs. of R32		3.3

[1]Rated capacity is certified under AHRI Standard 210/240. See www.ahrinet.org for information.

[2]Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

[3]The System Combination Ratio must be between 50–130%.

[4]Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[5]Communication cable between ODU, IDUs, and Central Controller must be a minimum of 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the ODU chassis only. ⃠ Do not ground the ODU to IDUs communication cable at any other point. Wiring must comply with all applicable local and national codes.

[6]Power wiring is field provided, solid or stranded, and must comply with all local and national codes. See page 11 for detailed electrical data.

[7]LG requires that LATS software be used on all projects to ensure correct line sizing. Designer must verify the shop drawing design against the as built design using LATS. Contractor must also use LG manufactured Y-Branch and Header Kits only.

[8]Take appropriate actions at the end of HVAC equipment life to recover, recycle, reclaim or destroy R32 refrigerant according to applicable regulations (40 CFR Part 82, Subpart F) under section 608 of CAA.

Electrical Data

Table 2: Heat Pump Only Outdoor Unit Electrical Data Table.

Nominal Tons	Unit Model No.	Phase	Hertz	Voltage	Voltage Range (Min. to Max.)	Compressor		Condenser Fan Motor(s)		MCA	MOP
						Quantity	Motor Amps RLA	Fan Qty.	Amps FLA x Qty.		
2.0	ZRUN024GSS0	1	60	208-230	187~253	1	20.5	1	0.7 x 1	26.4	30

Voltage tolerance is ±10%.

Maximum allowable voltage unbalance is 2%.

MCA = Minimum Circuit Ampacity.

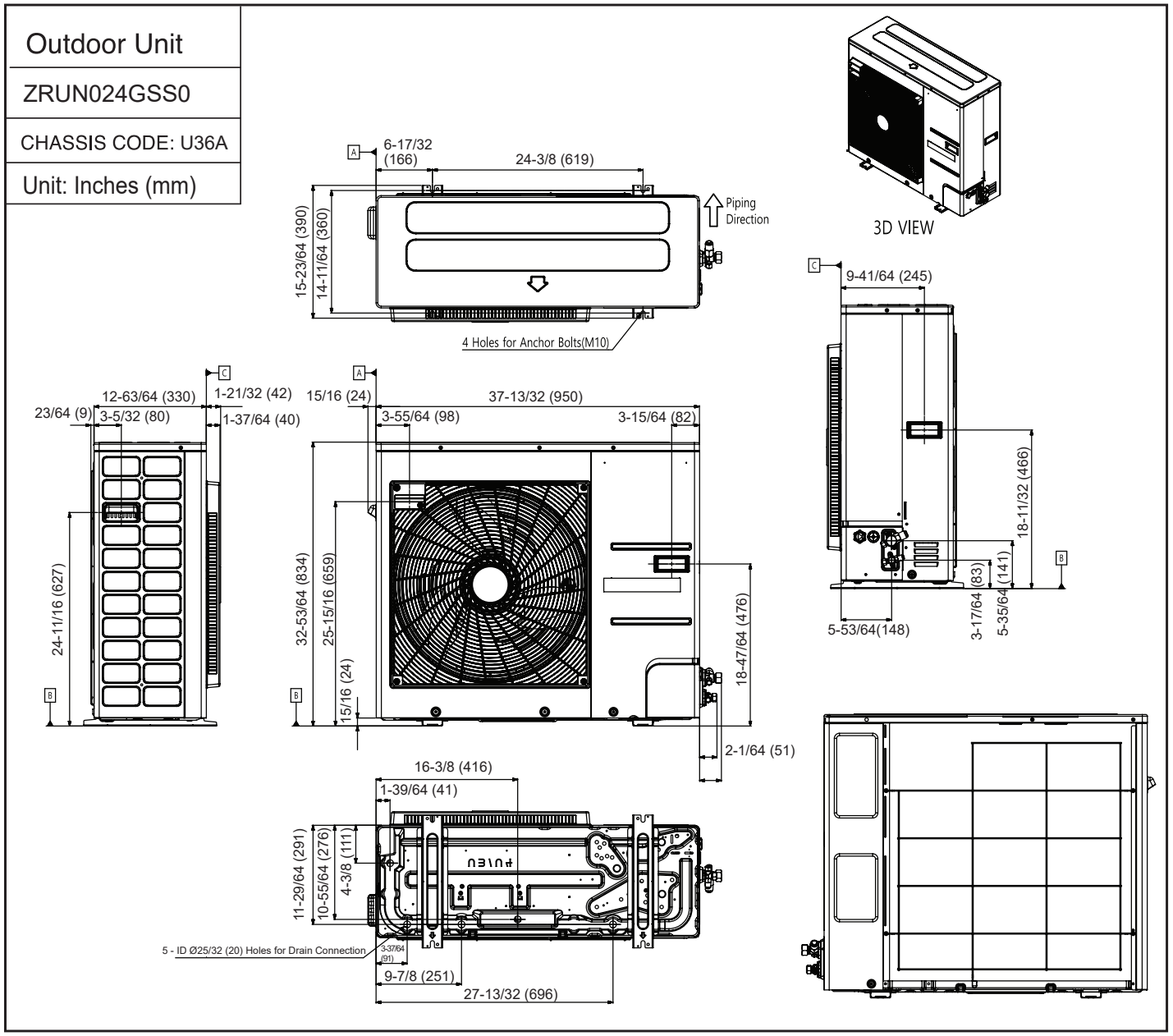
Maximum Overcurrent Protection (MOP) is calculated as follows: (Largest motor FLA x 2.25) + (Sum of other motor FLA) rounded down to the nearest standard fuse size.

RFA = Recommended Fuse Amps.

DIMENSIONS

ZRUN024GSS0

Outdoor Unit
ZRUN024GSS0
CHASSIS CODE: U36A
Unit: Inches (mm)



CENTER OF GRAVITY / CORNER WEIGHTS

ZRUN024GSS0

Figure 3: ZRUN024GSS0 Heat Pump Only Outdoor Unit Center of Gravity / Corner Weights.

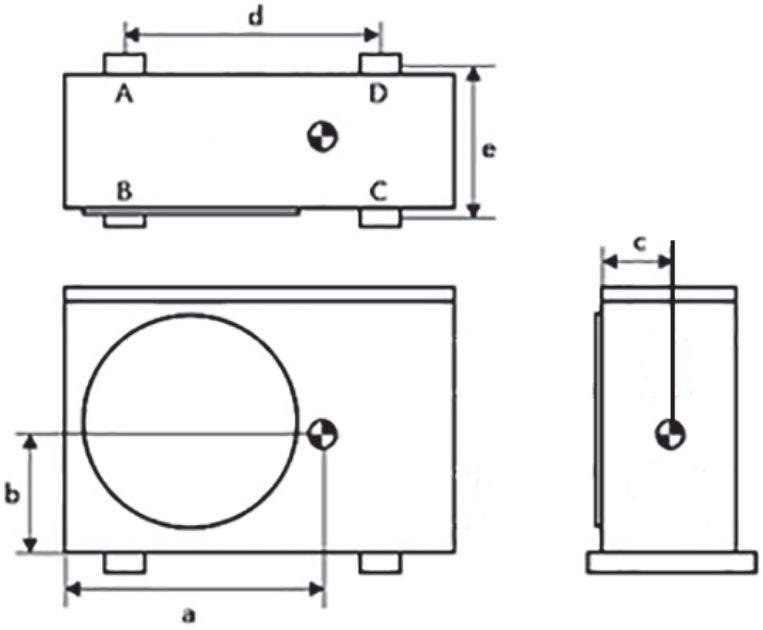


Table 3: ZRUN024GSS0 Heat Pump Only Outdoor Unit Center of Gravity and Corner Weight Specifications.

Model No.	Frame	Weight (lb.)		Center of Gravity (in.)			Leg (in.)		Corner Weight (lb.)			
		Shipping	Net	a	b	c	d	e	A	B	C	D
ZRUN024GSS0	U36A	167	148	23-7/32	12-19/32	5-29/32	24-13/32	14-3/16	20.4	26.5	53.7	47.4

WIRING DIAGRAM

ZRUN024GSS0

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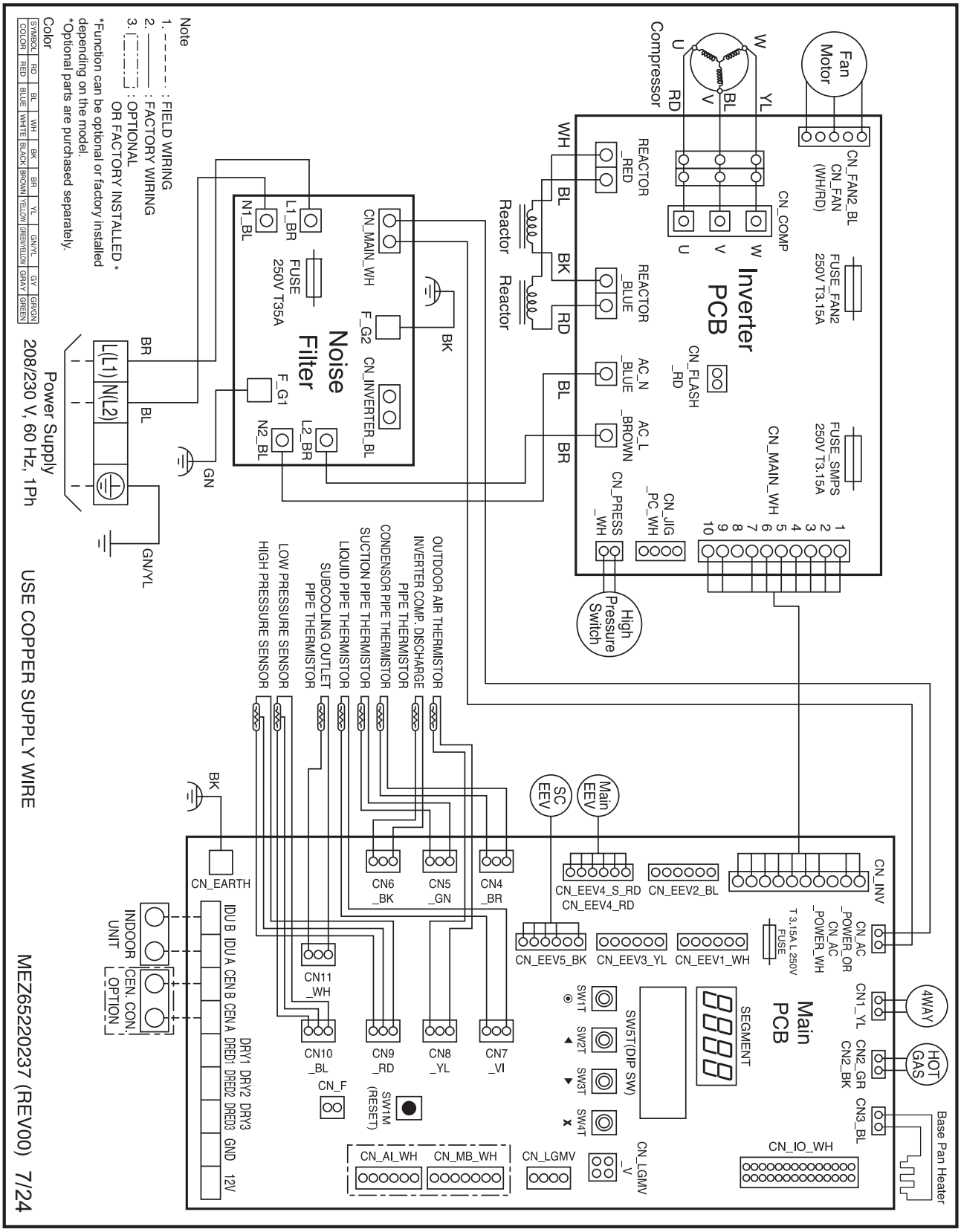
Figure 4: ZRUN024GSS0 Heat Pump Only Outdoor Unit Wiring Diagram.



WIRING DIAGRAM

ZRUN024GSS0

Table 4: ZRUN024GSS0 Heat Pump Only Outdoor Unit Wiring Diagram Legend.

Terminal	Description
Main PCB	
CN_INV	Inverter Communication Connector
CN_AC_POWER_OR / CN_AC_POWER_WH	Power to the PCB
CN1_YL	4-way Valve Connection on the Terminal
CN2_GN / CN2_BK	Hot Gas Connection
CN3_BL	Base Pan Heater Connection
CN_LGMV	Connection for LGMV
CN_EARTH	Earth
CN10_BL	Low Pressure Sensor Connection
CN11_WH	Subcooling Outlet Pipe Thermistor Connection
CN9_RD	High Pressure Sensor Connection
CN8_YL	Outdoor Air Thermistor Connection
CN7_VI	Liquid Line Thermistor Connection
CN6_BK	Inverter Compressor Discharge Pipe Thermistor Connection
CN5_GN	Suction Pipe Thermistor Connection
CN4_BR	Condenser Pipe Thermistor Connection
CN_EEV5_BK	Subcooling EEV
CN_EEV4_S_RD / CN_EEV4_RD	Main EEV
Inverter PCB	
CN_FAN2_BL / CN_FAN(WH/RD)	Fan Motor
CN_MAIN_WH	Main PCB Communication Connector
CN_PRESS_WH	High Pressure Switch
CN_FLASH_RD	EEPROM Connection
Noise Filter	
CN_INVERTER_BL	AC Power to Inverter

REFRIGERANT FLOW DIAGRAMS

ZRUN024GSS0

Cooling Operation

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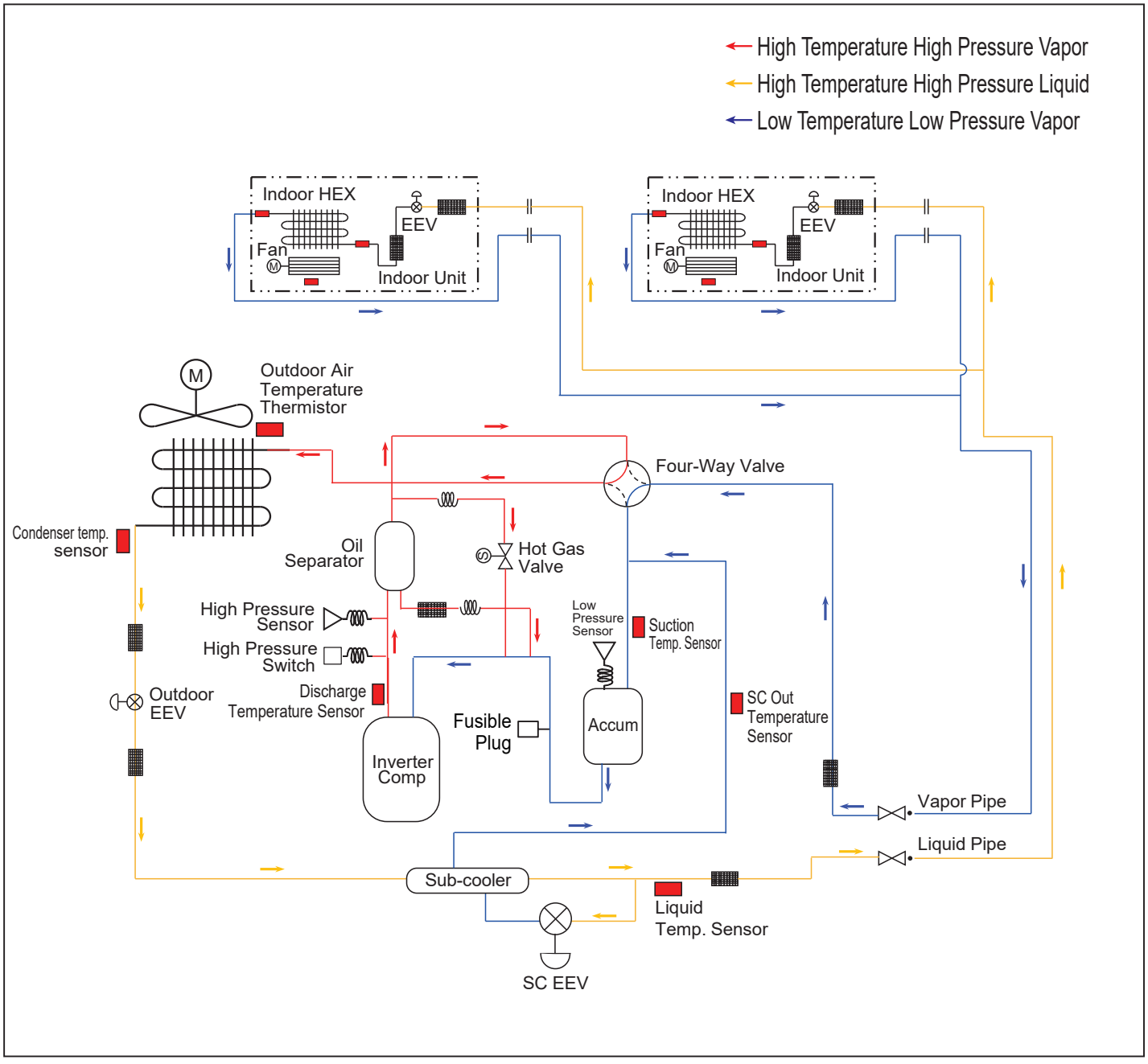
Figure 5: ZRUN024GSS0 Cooling Operation Refrigerant Flow Diagram.

Cooling Operation

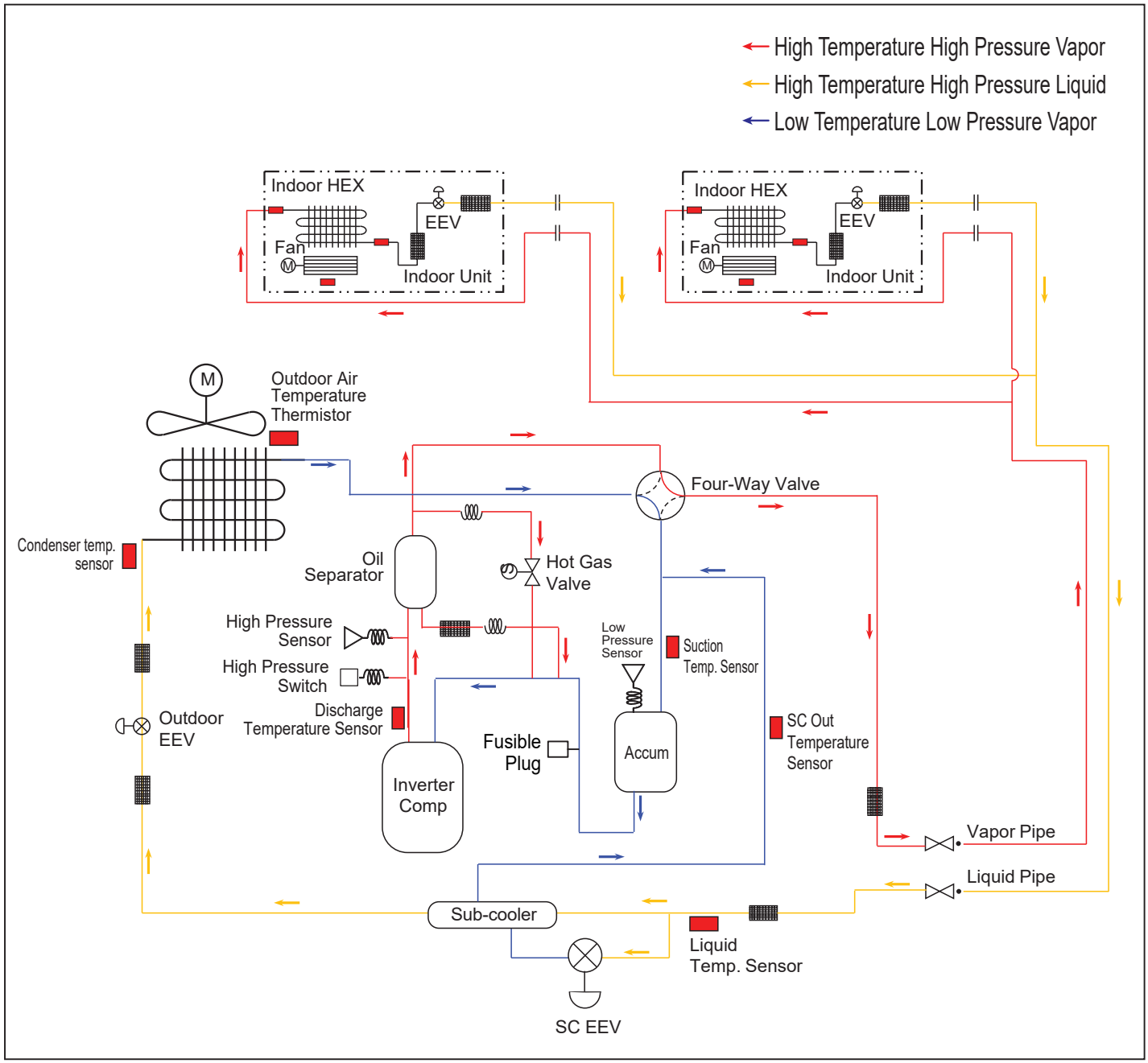


Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

LG

Figure 6: ZRUN024GSS0 Heating Operation Refrigerant Flow Diagram.

Heating Operation



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

Heat Pump Outdoor Unit Product Only Data

REFRIGERANT FLOW DIAGRAMS

ZRUN024GSS0

Oil Return / Defrost Operation

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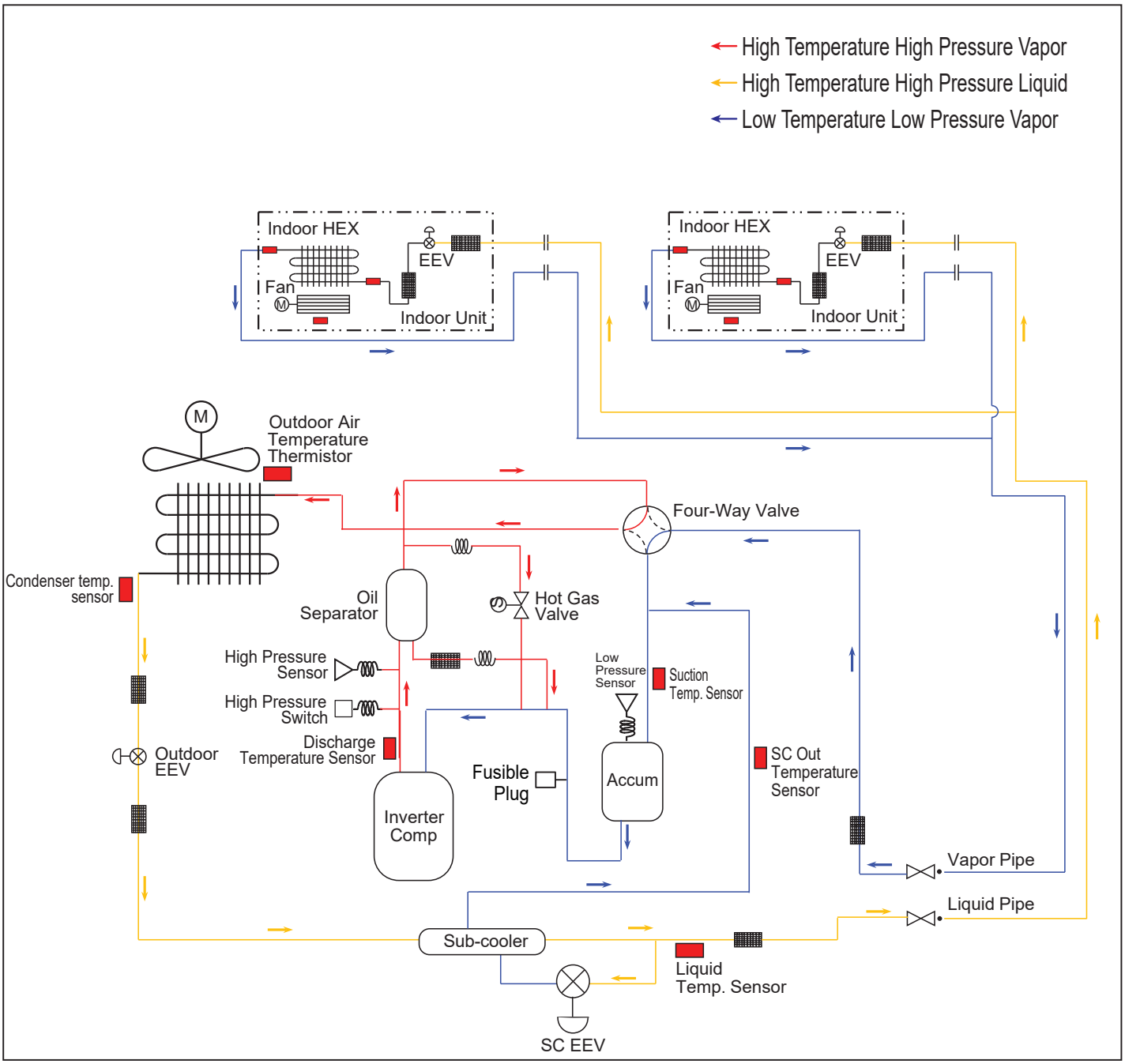
Figure 7: ZRUN024GSS0 Oil Return / Defrost Operation Refrigerant Flow Diagram.

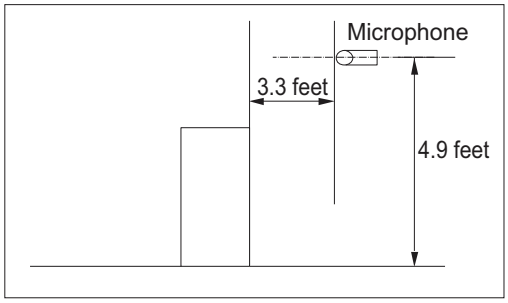
Oil Return / Defrost Operation



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

LG

Figure 8: ZRUN024GSS0 Heat Pump Only Outdoor Unit Sound Pressure Level Measurement Location.



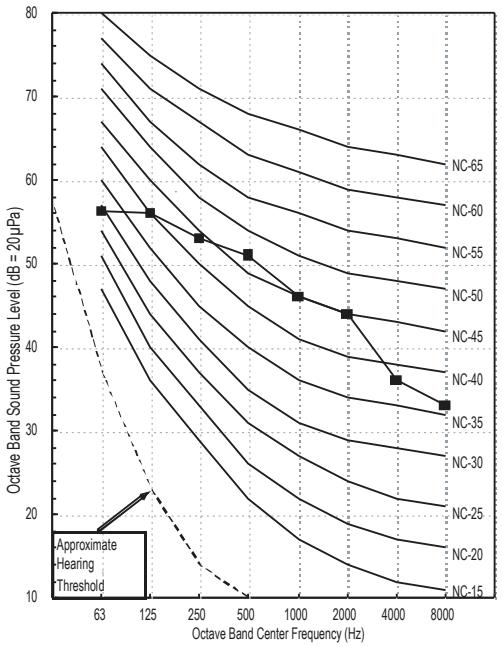
- Measurement taken 4.9' above finished floor, and at a distance of 3.3' from face of fan discharge.
- Measurements taken with no attenuation and units operating at full load normal operating condition.
- Sound level will vary depending on a range of factors such as construction (acoustic absorption coefficient) of particular area in which the equipment is installed.
- Sound levels are measured in dB(A)±3.
- Tested in anechoic chamber per ISO Standard 3745.
- Off-Peak Operation: Logic takes advantage of lower outdoor ambient temperatures and limits the outdoor unit fan speed during nighttime operation to lower the unit sound level.

Table 5: ZRUN024GSS0 Heat Pump Only Outdoor Unit Sound Pressure Levels (dB[A]).

Model No.	Cooling	Heating
ZRUN024GSS0	50	52

Figure 9: ZRUN024GSS0 Heat Pump Only Outdoor Unit Cooling and Heating Sound Pressure Level Diagrams.

Cooling



Heating

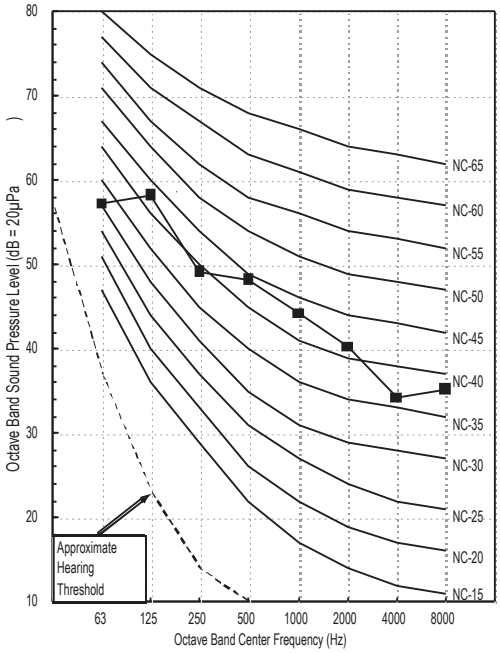
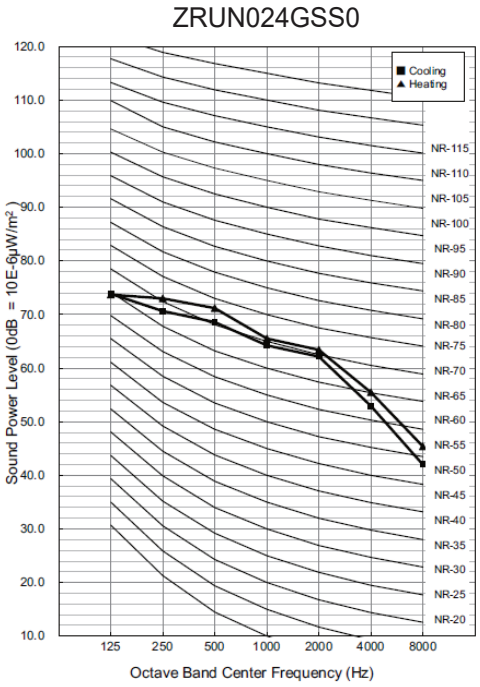


Table 6: ZRUN024GSS0 Heat Pump Only Outdoor Unit Sound Power Levels (dB[A]).

Model No.	Sound Power Levels (dB[A])	
	Cooling	Heating
ZRUN024GSS0	67	70

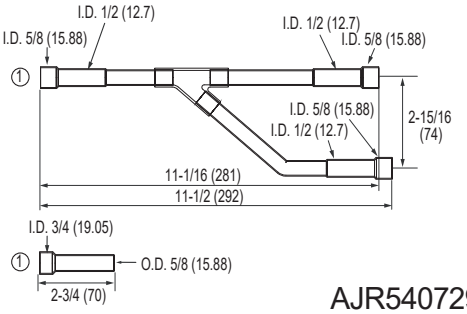
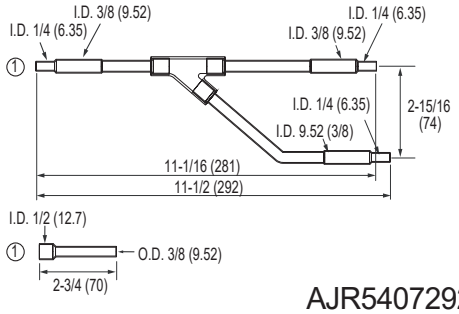
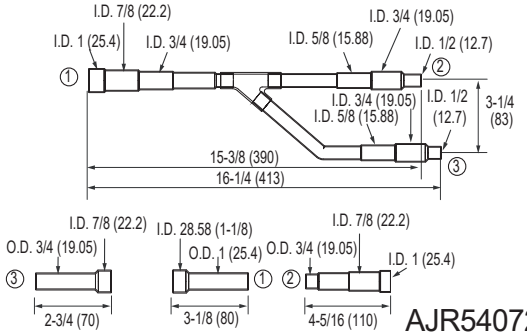
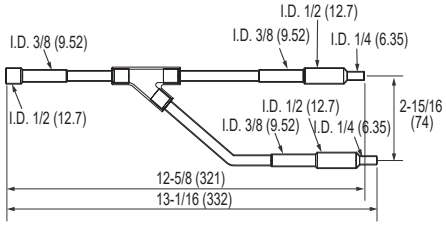
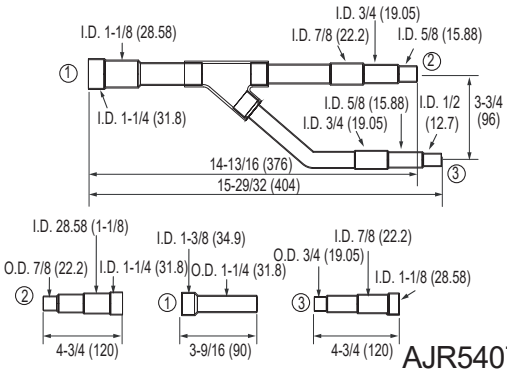
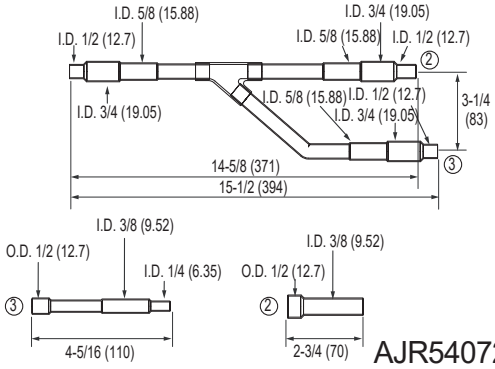
- Data is valid under diffuse field conditions.
- Data is valid under nominal operating conditions.
- Sound power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
- Sound level will vary depending on a range of factors such as construction (acoustic absorption coefficient) of particular area in which the equipment is installed.
- Reference acoustic intensity: 0dB = 10E-6μW/m^2

Figure 10: ZRUN024GSS0 Heat Pump Only Outdoor Unit Sound Power Level Diagram.



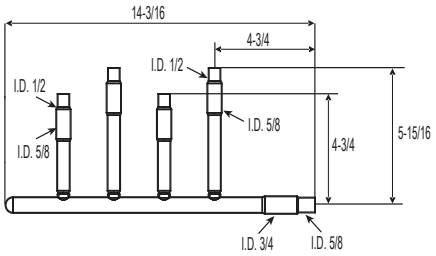
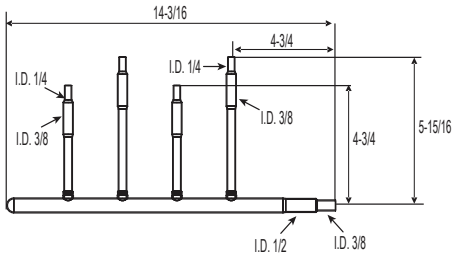
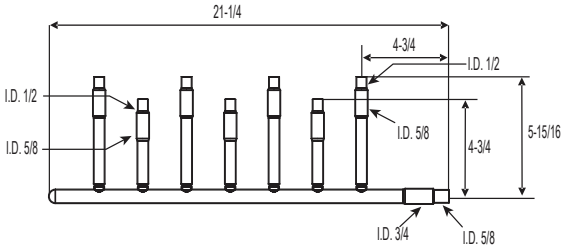
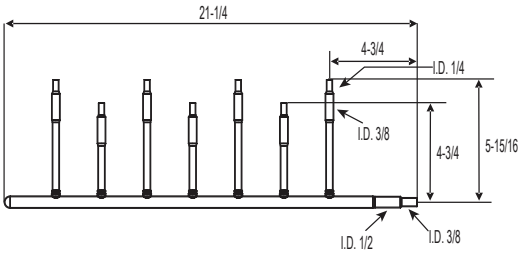
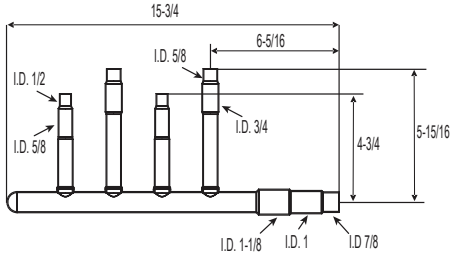
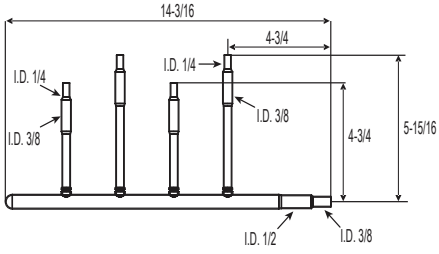
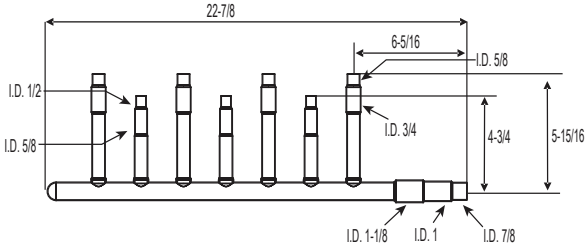
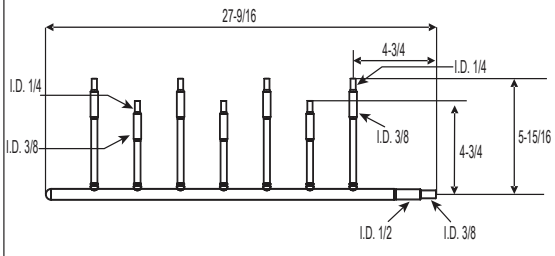
Y-Branches for Heat Pump Systems

(Unit: Inch [mm])

Models	Pipe	
	Vapor Pipe	Liquid Pipe
ARBLN01621	 AJR54072929	 AJR54072927
ARBLN03321	 AJR54072930	 AJR54072928
ARBLN07121	 AJR54072933	 AJR54072931

Headers

Unit: Inch

Models	Vapor pipe	Liquid pipe
4 branch ARBL054		
7 branch ARBL057		
4 branch ARBL104		
7 branch ARBL107		

LG

Low Ambient Wind Baffle Kit

(ZLABGP04A)

Optional low ambient baffle kits allow for Multi V S outdoor unit operation down to -9.9°F in cooling mode.

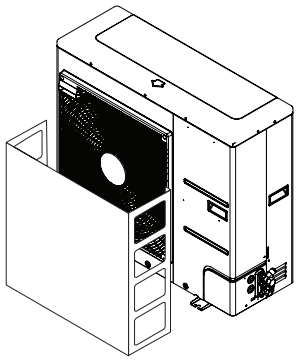
Includes:

- 20 Gauge Paint Grip Wind Baffle in Soft Dove Grey
- Four (4) Zinc-Plated Pan-Head Phillips Screws, #8 x 1/2"

Use one (1) ZLABGP04A kit with the 2-ton ZRUN024GSS0.

Contact an LG Sales Representative for more information.

Figure 11: Low Ambient Wind Baffle Kit.



LG Monitoring View (LGMV) Diagnostic Software and Cable

LG Monitoring View (LGMV) is a maintenance and troubleshooting tool for Multi V™ air conditioning systems. LGMV formats are available for computer or mobile phone use.

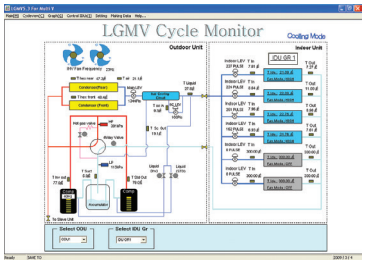
The main screen for LGMV allows the user to view the following real time data:

- Actual inverter compressor speed
- Target inverter compressor speed
- Actual outdoor fan speed
- Target outdoor unit fan speed
- Actual superheat
- Target superheat
- Actual subcooler circuit superheat
- Target subcooler circuit superheat
- Main EEV position
- Subcooling EEV position
- Inverter compressor current transducer value
- Outdoor air temperature
- Actual high pressure/saturation temperature
- Actual low pressure/saturation temperature
- Suction temperature
- Inverter compressor discharge temperature
- Constant speed compressor discharge temperature
- Front outdoor coil pipe temperature
- Back outdoor coil pipe temperature
- Liquid line pipe temperature
- Subcooler inlet temperature
- Subcooler outlet temperature
- Average indoor unit (IDU) pipe temperature
- Inverter compressor operation indicator light
- Four-way reversing valve operation indicator light
- Pressure graph showing actual low pressure and actual high pressure levels
- Error code display
- Operating mode indicator
- Target high pressure
- Target low pressure
- PCB (printed circuit board) version
- Software version
- Installer name
- Model no. of outdoor units
- Site name
- Total number of connected indoor units
- Communication indicator lights
- Indoor unit capacity
- Indoor unit operating mode
- Indoor unit fan speed
- Indoor unit EEV position
- Indoor unit room temperature
- Indoor unit inlet pipe temperature
- Indoor unit outlet pipe temperature
- Indoor unit error code

Additional screens can be accessed by tabs on the main screen

1. Cycleview: Graphic of internal components including
   - Compressors showing actual speeds
   - EEVs
   - Indoor Units
   - Liquid injection valves
   - Temperature and pressure sensors
   - Four-way reversing valve
   - Outdoor fans showing status and speeds
2. Graph:
   Full screen graph of actual high and low pressures and high and low pressure limits. A sliding bar enables user to go back in time and view data.
3. Control IDU: Enables user to turn on all IDUs default setpoints of 86°F in heat mode or 64°F in cool mode.
4. Setting: Converts metric values to imperial values.
5. Making Data: Recording of real time data to a separate file created to be stored on the user's computer.
6. Loading Data: Recorded data from a saved ".CSV" file can be loaded to create an LGMV session.
7. Electrical Data: Screen is changed to show the following:
   - Inverter compressor
     - Amps / Volts / Power Hz
     - Inverter control board fan Hz
   - Constant compressor
     - Current transducer value
     - Phase

Figure 12: Sample Cycleview (Computer View Example).



In lieu of connecting to the outdoor unit, user has the option to connect to the indoor unit with a connector kit. When connected through the indoor unit, user will not be able to record data.

This software can be used to both pre-set-up new systems and troubleshoot existing systems. LGMV data can be recorded to a ".CSV" file and emailed to an LG representative to assist with diagnostic evaluations.

LGMV is available in different formats. Contact your LG Sales Representative for system requirements and for more information.

ThinQ

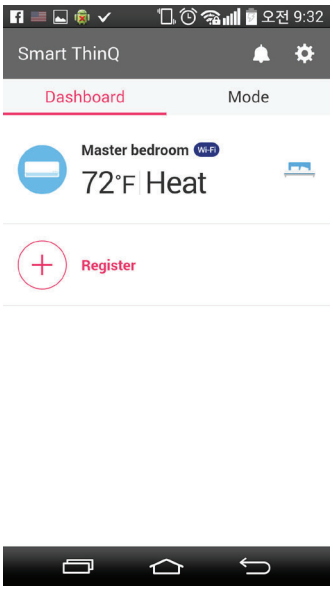
LG ThinQ is a built-in Wi-Fi module, along with a free smart phone app that provides monitoring and remote control capabilities for use with certain LG indoor units. The app has the following features and benefits:

- Sign in to the app using LG credentials, or using Google® or Facebook® login credentials. Users only have to log in to the app once; the app remembers login details for subsequent logins.
- View current temperature settings of the air conditioning unit and change temperature, fan speed, and air flow direction from anywhere in the house or at a remote location (through the use of wireless connection). Multiple users can control the household air conditioning unit remotely.
- Monitor filter usage of the unit.
- Set up weekly schedules to start and stop air conditioner activity.
- Set up the unit to run in different Modes, depending on the user's schedule. Set up specific temperatures for when the user is home, away on vacation, or sleeping.
- Troubleshoot problems, and view tips on general maintenance of the system using the Smart Diagnosis function.

**Google is a registered trademark of Google Inc.; Facebook is a registered trademark of Facebook.*

Contact your LG Sales Representative or visit www.lghvac.com for system requirements, how to download the app, a user's manual, or other information.

Figure 13: Example of an LG Smart ThinQ Screen (appearances my differ depending on version of software).



COMBINATION (HEAT PUMP / HEAT RECOVERY) ODU PRODUCT DATA

Mechanical Specifications on page 27
General Data on page 28
Electrical Data on page 29
Dimensions on page 30
Center of Gravity / Corner Weights on page 31
Wiring Diagrams on page 32
Refrigerant Flow Diagrams on page 34
Acoustic Data on page 43
Accessories on page 45

Multi V S with LGRED° Combination Outdoor Units

General

The LG Multi V S with LGRED Variable Refrigerant Flow (VRF) combination outdoor unit is a unified frame and can be configured to operate both as a Heat Pump system or a Heat Recovery System. The outdoor unit is connected to the indoor units with a single refrigerant piping system using factory designed and supplied Y-branches, Headers, and/or Heat Recovery Units, and have integrated controls.

The system is capable of being designed for minimum piping and maximum design flexibility. Each Heat Recovery Unit piping port is independently capable of operating in either heating or cooling mode regardless of the mode of other piping ports on the same heat recovery unit or in the system. The Heat Recovery Unit is capable of changing mode of individual indoor units or zones (cooling to heating or heating to cooling).

LG components are manufactured in a facility registered to ISO 9001 and ISO 14001, which is a set of standards applying to environmental protection set by the International Organization for Standardization (ISO). The units are Electrical Testing Laboratories (ETL) listed and bear the ETL label. All internal wiring is in accordance with the National Electrical Code (NEC).

Temperature Ranges

Heat Pump Configuration

In Heat Pump configuration, the system can operate in heating only mode (i.e., all indoor units in heating mode) from -13°F to 61°F outdoor ambient wet bulb. Heat Pump systems can operate in cooling mode from 23°F to 122°F outdoor ambient dry bulb. Optional low ambient cooling kit extends the cooling only operating range (i.e., all indoor units in cooling mode) down to -9.9°F. See the Multi V S with LGRED Installation Manual for DIP switch settings to change from Heat Pump operation to Heat Recovery operation, or from Heat Recovery operation to Heat Pump operation.

Heat Recovery Configuration

In Heat Recovery configuration, the system can operate in heating only mode (i.e., all indoor units in heating mode) from -13°F to +61°F outdoor ambient wet bulb. Heat Recovery systems can operate in cooling only mode from 23°F to 122°F outdoor ambient dry bulb. Optional low ambient cooling kit extends cooling only operation range (i.e., all indoor units in cooling mode) down to -9.9°F. Heat Recovery Synchronous cooling based operation range is 14°F to 81°F outdoor ambient dry bulb; Synchronous heating based operation range is 14°F to 61°F wet bulb. See the Multi V S with LGRED Installation Manual for DIP switch settings for Heat Recovery and Heat Pump operation.

Casing / Frame

Outdoor units are constructed with galvanized enamel paint. Each frame has a removable inspection panel to allow access to service tool connection, DIP switches, auto addressing, and error code display without removing the entire front panel. The entire front panel of the outdoor unit is removable for maintenance. Outdoor unit frames are completely factory assembled, piped and wired. Outdoor unit includes a built-in base pan heater.

Refrigerant System

The refrigeration system consists of a single refrigeration circuit and uses R32 refrigerant. The outdoor unit is provided with factory installed components, including a refrigerant strainer, check valves, oil separator, accumulator, four-way reversing valve, electronic controlled expansion valve (EEV), high and low side charging ports, high pressure safety switch, service valves, and interconnecting piping. Also included is an integral subcooler assembly consisting of a double spiral tube type subcooling heat exchanger and EEV providing refrigerant subcooling modulation up to 23°F.

Compressors

All 1-phase combination outdoor unit frames are equipped with one hermetic digitally controlled inverter driven scroll compressor to modulated capacity (variable from 10 / 12 up to 160Hz, modulate in 1.0 Hz increments).

Outdoor Unit Coil

The outdoor unit coils are of a nonferrous construction with louvered aluminum fins on copper tubing, and are protected by a metal guard. Coil fins have a factory applied corrosion resistant Black Coated Fin™ and hydrophilic coating.

Figure 14: Combo (HP / HR) Outdoor Unit.

Fans and Motors

Outdoor unit frames include one direct drive, variable speed propeller type fan. All fan motors have inherent protection, permanently lubricated bearings, and are variable speed with a maximum speed up to 750 rpm. Raised guards are provided to limit contact with moving parts. Outdoor units have horizontal discharge airflow.

Electrical

Outdoor units are available in 208-230V 60Hz, 1-phase power supply. The units include over/under-voltage protection.

Controls

Outdoor units are factory wired with necessary electrical control components, integral microprocessors, printed circuit boards, thermistors, sensors, terminal blocks, and power lugs. The control circuit between the indoor units, heat recovery unit(s) (heat recovery systems only) and the outdoor unit is an RS-485 daisy chain communication bus. The cable is two conductor, twisted, stranded and shielded, 18 AWG. Microprocessor-based algorithms provide component protection, soft-start capability, refrigeration system pressure, temperature, defrost, and ambient control.

Refrigerant Leak Detector

Multi V indoor units have a built-in leak detector sensor to detect any refrigerant leaks.

Shut-off Valve

LG single port shutoff valve (PRHPZ010A; sold separately) is available as an accessory.

Table 7: Combination (Heat Pump / Heat Recovery) Outdoor Unit Specifications.

Model Numbers		3.0 Ton ZRUM036GSS0	4.0 Ton ZRUM048GSS0	5.0 Ton ZRUM060GSS0
Cooling Performance				
Nominal Cooling Capacity (Btu/h)[1]		36,000	48,000	60,000
Rated Cooling Capacity (Btu/h)[2]		36,000	48,000	60,000
Heating Performance				
Nominal Heating Capacity (Btu/h)[1]		42,000	54,000	67,000
Rated Heating Capacity (Btu/h)[2]		42,000	54,000	67,000
Operating Range				
Cooling (°F DB)[3]		23 to 122		
Heating (°F WB)		-13 to +61		
Synchronous — Cooling Based (°F DB)		14 to 81		
Synchronous — Heating Based (°F WB)		14 to 61		
Compressor				
Inverter Type / Quantity		Hermetically Sealed Scroll / 1	Hermetically Sealed Scroll / 1	Hermetically Sealed Scroll / 1
Oil / Type		PVE / FW68L	PVE / FW68L	PVE / FW68L
Fan (Side Discharge)				
Type		Propeller	Propeller	Propeller
Motor Output (kW) x Qty.		0.124 x 2	0.124 x 2	0.124 x 2
Motor / Drive		Brushless Digitally Controlled / Direct		
Operating Range (RPM)	Cooling	0~750	0~750	0~750
	Heating	0~700	0~700	0~700
Maximum Air Volume (CFM)		2 x 2119	2 x 2119	2 x 2119
Unit Data				
Refrigerant Type		R32	R32	R32
Refrigerant Control/Location		EEV / Indoor Unit	EEV / Indoor Unit	EEV / Indoor Unit
Max. Number Indoor Units / System[4]		6	8	12
Sound Pressure dB(A)[5]		50 / 52	53 / 54	57 / 59
Net Unit Weight (lbs.)		257	257	267
Shipping Weight (lbs.)		286	286	296
Communication Cables[6,7]		2 x 18	2 x 18	2 x 18
External Static Pressure (in. w.g.)		0.08	0.08	0.08
Heat Exchanger				
Material and Fin Coating		Copper Tube / Aluminum Fin and Black Coated Fin™ / Hydrophilic		
Rows / Fins per inch		2 / 14	2 / 14	3 / 14
Piping / Connections for Heat Recovery Operation[8]				
Liquid Line Connection (in., OD)		3/8 Braze	3/8 Braze	3/8 Braze
Low Pressure Vapor Line Connection (in., OD)		3/4 Braze	3/4 Braze	3/4 Braze
High Pressure Vapor Line Connection (in., OD)		5/8 Braze	5/8 Braze	5/8 Braze
Piping / Connections for Heat Pump Operation[8]				
Liquid Line Piping / Connection (in., OD)		3/8 Braze	3/8 Braze	3/8 Braze
Vapor Line Piping / Connection (in., OD)		5/8 Braze	5/8 Braze	3/4 Braze
Factory Charge lbs. of R32		6	6	6.9

[1]Nominal capacity applied with non-ducted indoor units, and is rated 0 ft. above sea level with 25 ft. of refrigerant line per indoor unit and a 0 ft. level difference between outdoor and indoor units. All capacities are net with a Combination Ratio between 95–105%.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB) and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and 59ºF wet bulb (WB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

[2]Rated capacity is certified under AHRI Standard 20/240. See www.ahrinet.org for information.

[3]Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F. .

[4]The System Combination Ratio must be between 50–130%.

[5]Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745.

[6]Communication cable between ODU, IDUs/Heat Recovery Units, and Central Controller must be a minimum of 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the ODU chassis only. ⃠ Do not ground the ODU to IDUs/Heat Recovery Units communication cable at any other point. Wiring must comply with all applicable local and national codes.

[7]Power wiring is field provided, solid or stranded, and must comply with all local and national codes. See page 29 for detailed electrical data.

[8]LG requires that LATS software be used on all projects to ensure correct line sizing. Designer must verify the shop drawing design against the as built design using LATS. Contractor must also use LG manufactured Y-Branch and Header Kits only.

[9]Take appropriate actions at the end of HVAC equipment life to recover, recycle, reclaim or destroy R32 refrigerant according to applicable regulations (40 CFR Part 82, Subpart F) under section 608 of CAA.

Electrical Data

Table 8: Combination Outdoor Unit Electrical Data Table.

Nominal Tons	Unit Model No.	Phase	Hertz	Voltage	Voltage Range (Min. to Max.)	Compressor		Condenser Fan Motor(s)		MCA	MOP
						Quantity	Motor Amps RLA	Fan Qty.	Amps FLA x Qty.		
3.0	ZRUM036GSS0	1	60	208-230	187~253	1	24	2	0.5 x 2	31	40
4.0	ZRUM048GSS0					1	24	2	0.5 x 2	31	40
5.0	ZRUM060GSS0					1	25.5	2	0.5 x 2	32.9	40

Voltage tolerance is ±10%.

Maximum allowable voltage unbalance is 2%.

MCA = Minimum Circuit Ampacity.

Maximum Overcurrent Protection (MOP) is calculated as follows: (Largest motor FLA x 2.25) + (Sum of other motor FLA) rounded down to the nearest standard fuse size.

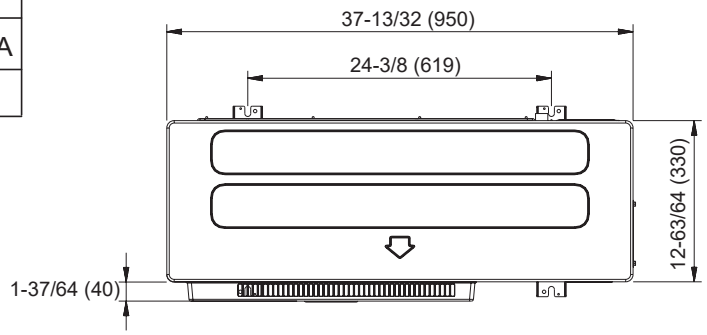
RFA = Recommended Fuse Amps.

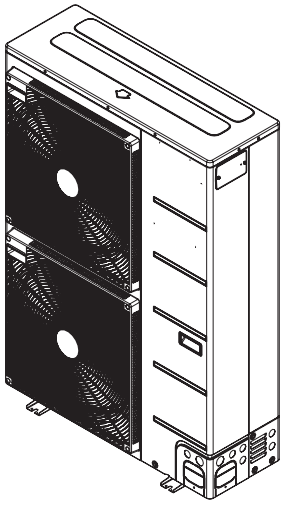
DIMENSIONS

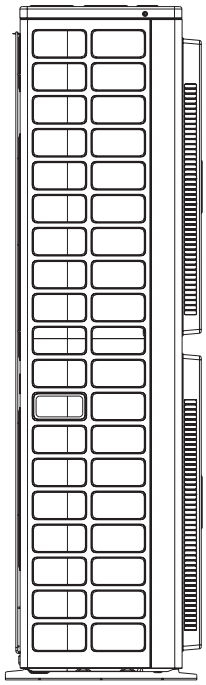
ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0

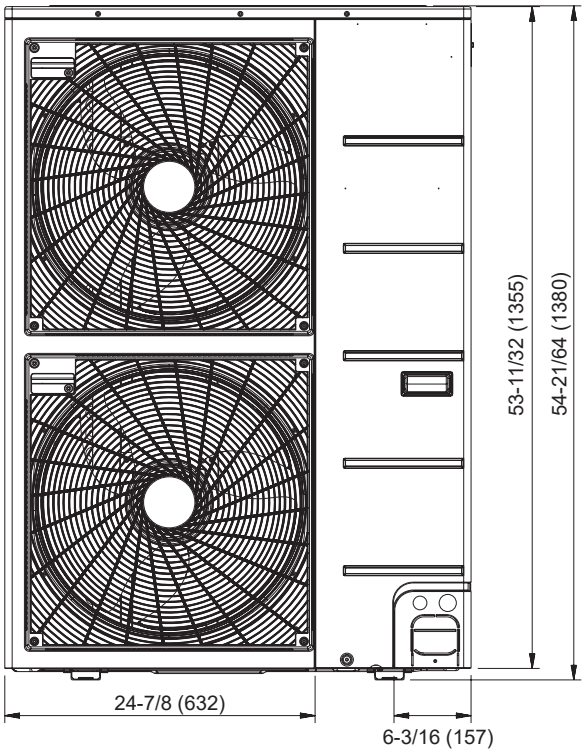
MULTI V™ S WITH LGRED°

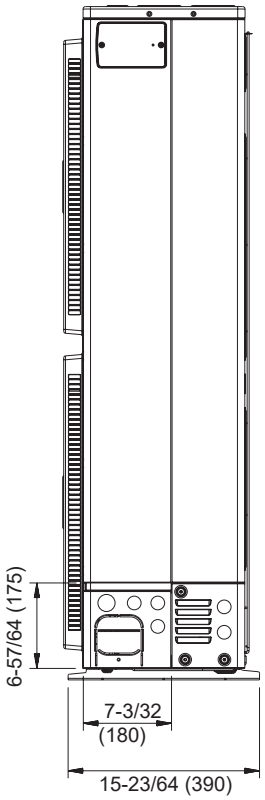
Outdoor Unit
ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0
CHASSIS CODE: U60A
Unit: Inches (mm)











LG

CENTER OF GRAVITY / CORNER WEIGHTS

ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0

Figure 15: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Outdoor Unit Center of Gravity / Corner Weights.

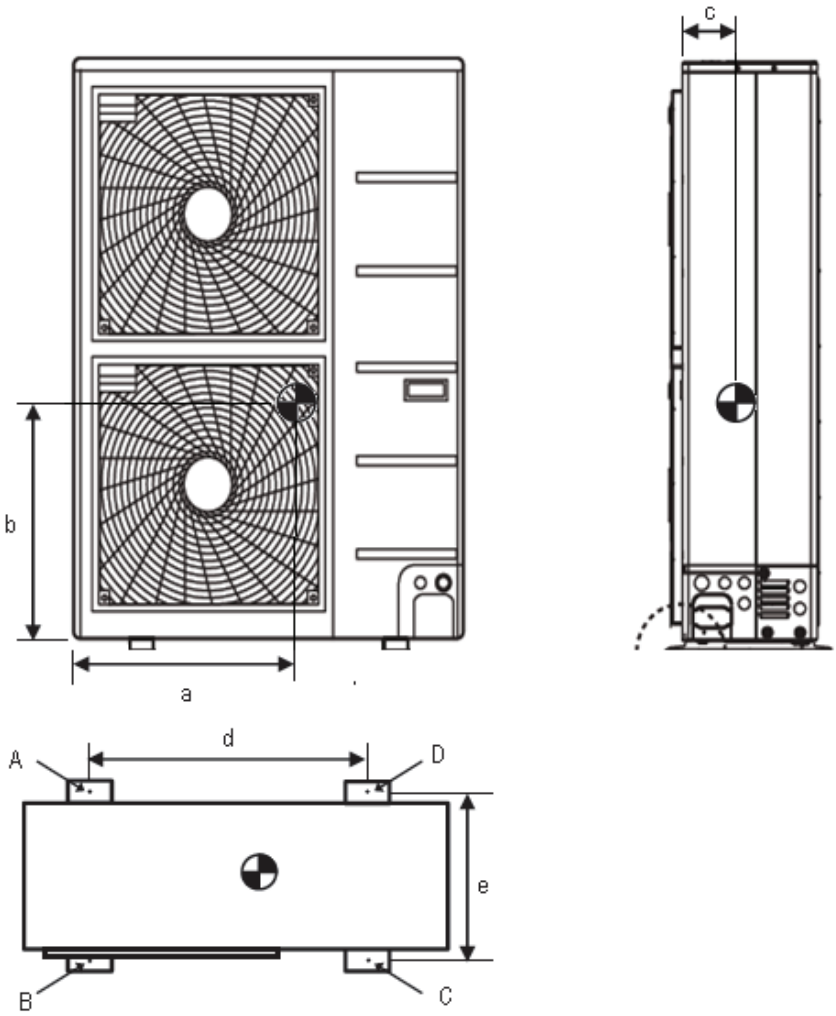


Table 9: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Outdoor Unit Center of Gravity and Corner Weight Specifications.

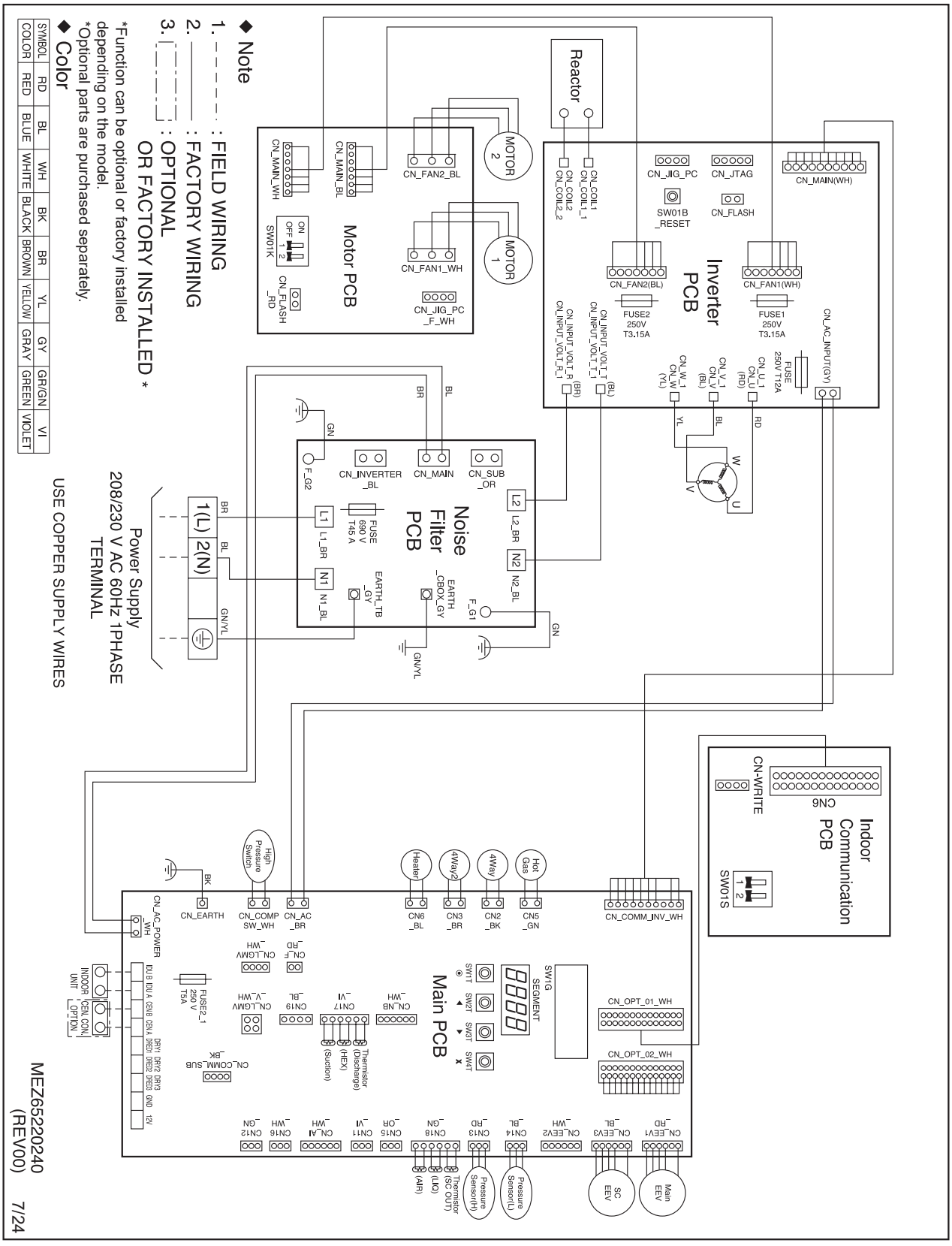
Model Nos.	Frame	Weight (lb.)		Center of Gravity (in.)			Leg (in.)		Corner Weight (lb.)			
		Shipping	Net	a	b	c	d	e	A	B	C	D
ZRUM036GSS0	U60A	286	257	27-7/32	21-15/32	6-5/8	24-13/32	14-3/16	17.2	19.6	92.3	80.8
ZRUM048GSS0	U60A	286	257	27-7/32	21-15/32	6-5/8	24-13/32	14-3/16	17.2	19.6	92.3	80.8
ZRUM060GSS0	U60A	296	267	27-7/32	21-15/32	6-5/8	24-13/32	14-3/16	21.6	24.6	115.7	101.2

WIRING DIAGRAM

ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0

MULTI V™ S WITH LGRED°

Figure 16: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Outdoor Unit Wiring Diagram.



LG

WIRING DIAGRAM

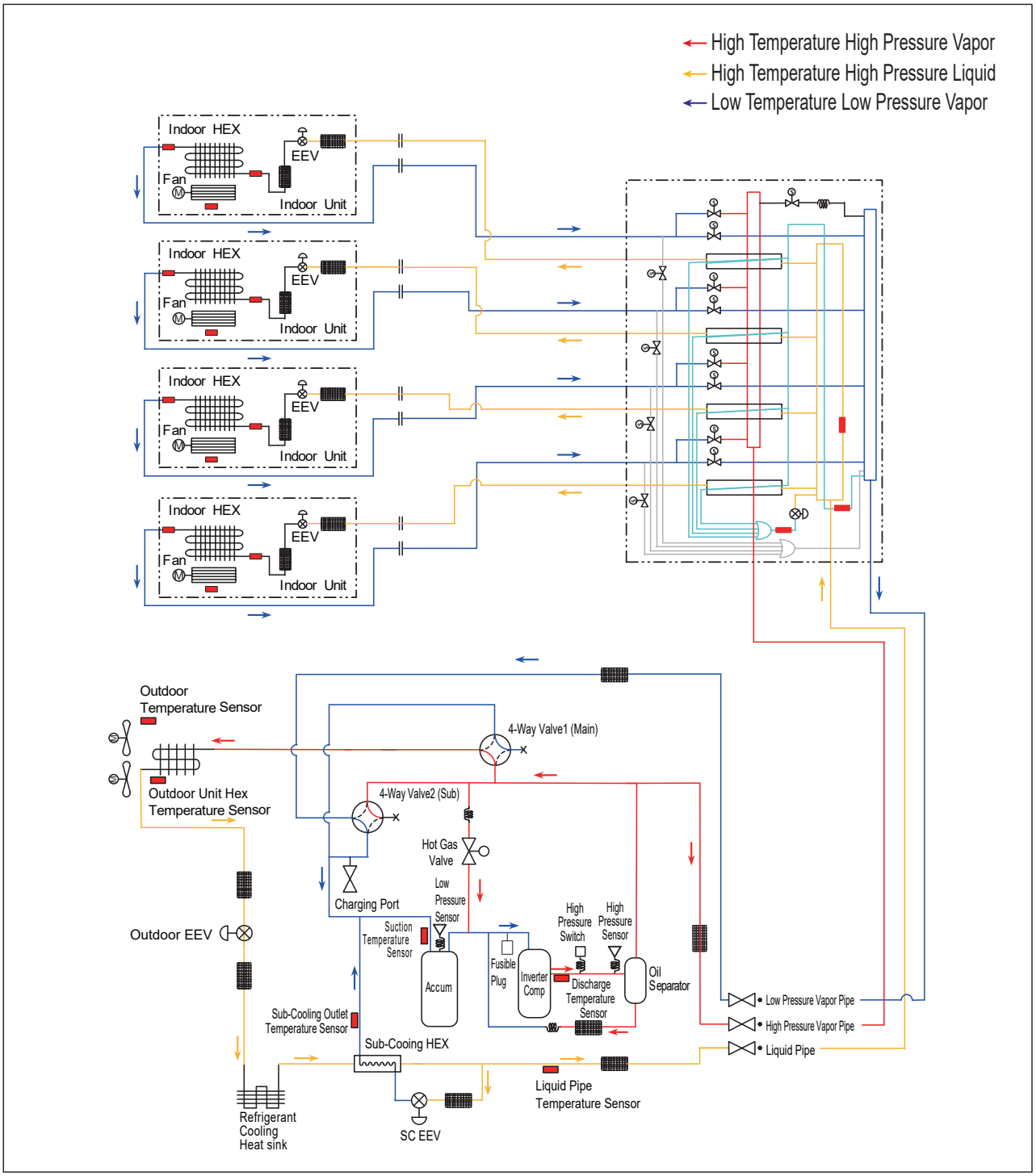
ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0

Table 10: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Outdoor Unit Wiring Diagram Legend.

Terminal	Description
Main PCB	
CN_COMM_INV_WH	Communication Terminal Block
CN_OPT_01_WH	Optional PCB Communication Connector
CN_OPT_02_WH	Optional PCB Communication Connector
CN_EEV1_RD	Main EEV Connection
CN_EEV3_BL	Sub Cooling EEV Connection
CN14_BL	Low Pressure Sensor Connection
CN13_RD	High Pressure Sensor Connection
CN18_GN	Subcooling Outlet Pipe Thermistor Connection
CN_COMM_SUB_BK	Communication for Sub
CN_AC_POWER_WH	Power to the PCB
CN_EARTH	Earth
CN_COMP_SW_WH	High Pressure Switch
CN_LGMV_WH	Connection to LGMV
CN_LGMV_V_WH	Additional Connection to LGMV
CN17_VI	Thermistor Connection for Discharge Suction and HEX
CN_AC_BR	Connection between Main PCB and Inverter PCB
CN6_BL	Connection to Base Pan Heater
CN3_BR	Connection to Second 4-way Valve
CN2_BK	Connection to First 4-way Valve
CN5_GN	Connection to Hot Gas
Indoor Communication PCB	
CN6	Main PCB Communication Connector
CN-WRITE	Communication Debugging Port
SW01S	DIP Switch Setting
Inverter PCB	
CN_MAIN(WH)	Main PCB Communication Connector
CN_AC_INPUT(GY)	AC Power Input
CN_U_1 / CN_U(RD)	Connection to Compressor
CN_V_1 / CN_V(BL)	Connection to Compressor
CN_W_1 / CN_W(YL)	Connection to Compressor
CN_INPUT_VOLT_T / CN_INPUT_VOLT_T_1	Power Input (T)
CN_INPUT_VOLT_R / CN_INPUT_VOLT_R_1	Power Input (R)
CN_COIL2 / CN_COIL2_2	Connection to Reactor
CN_COIL1 / CN_COIL1_1	Connection to Reactor
CN_FAN2(BL)	Communication and Power Input of Fan Motor 2
CN_FLASH	EEPROM Connection
Motor PCB	
CN_FAN2_BL	Communication and Power Input of Fan Motor 2 (Motor PCB - Motor 1)
CN_FAN1_WH	Communication and Power Input of Fan Motor 1 (Motor PCB - Motor 2)
CN_FLASH_RD	Connection for Flashing Motor
CN_MAIN_WH	Communication and Power Input of Fan Motor 1 (Motor PCB - Inverter PCB)
CN_MAIN_BL	Communication and Power Input of Fan Motor 2 (Motor PCB - Inverter PCB)
Noise Filter	
EARTH_CBOX_GY	Ground
EARTH_TB_GY	Ground
CN_INVERTER_BL	Connection between Noise Filter and inverter PCB
CN_MAIN	Connection to Main PCB

Figure 17: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Recovery - Cooling Mode Refrigerant Flow Diagram.

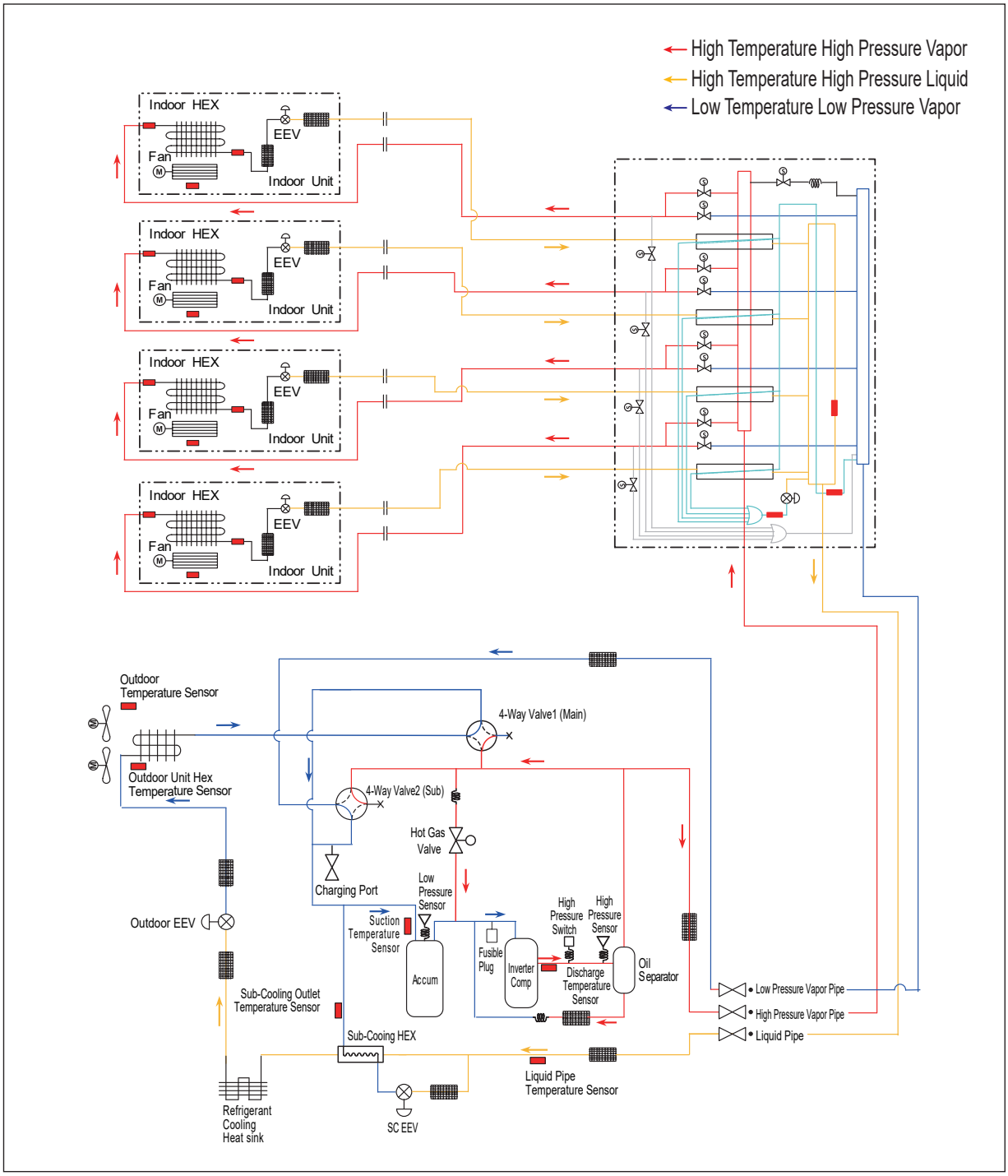
Heat Recovery – Cooling Mode



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

Figure 18: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Recovery - Heating Mode Refrigerant Flow Diagram.

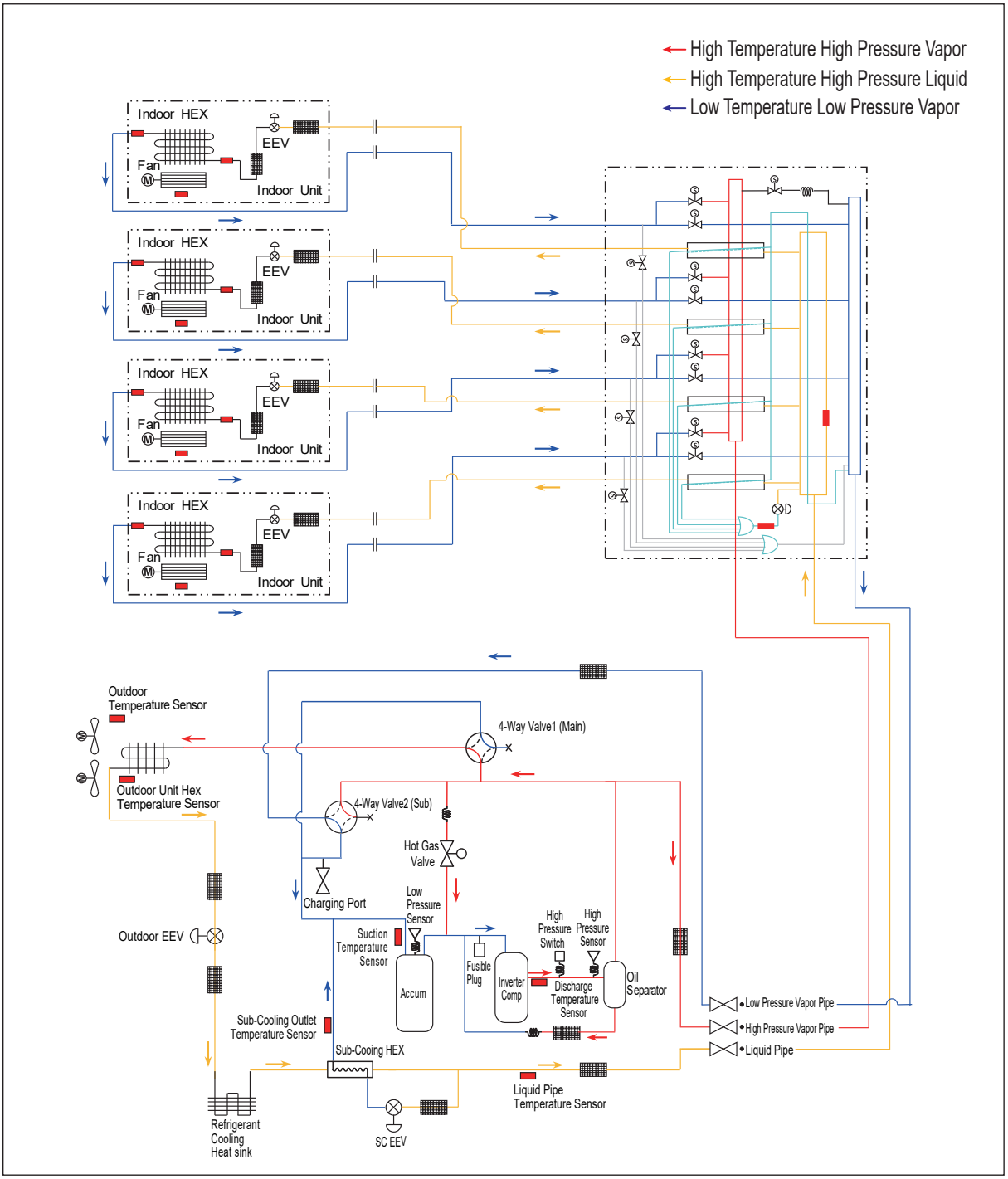
Heat Recovery – Heating Mode



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

Figure 19: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Recovery - Oil Return and Defrost Operation Refrigerant Flow Diagram.

Heat Recovery – Oil Return and Defrost Operation



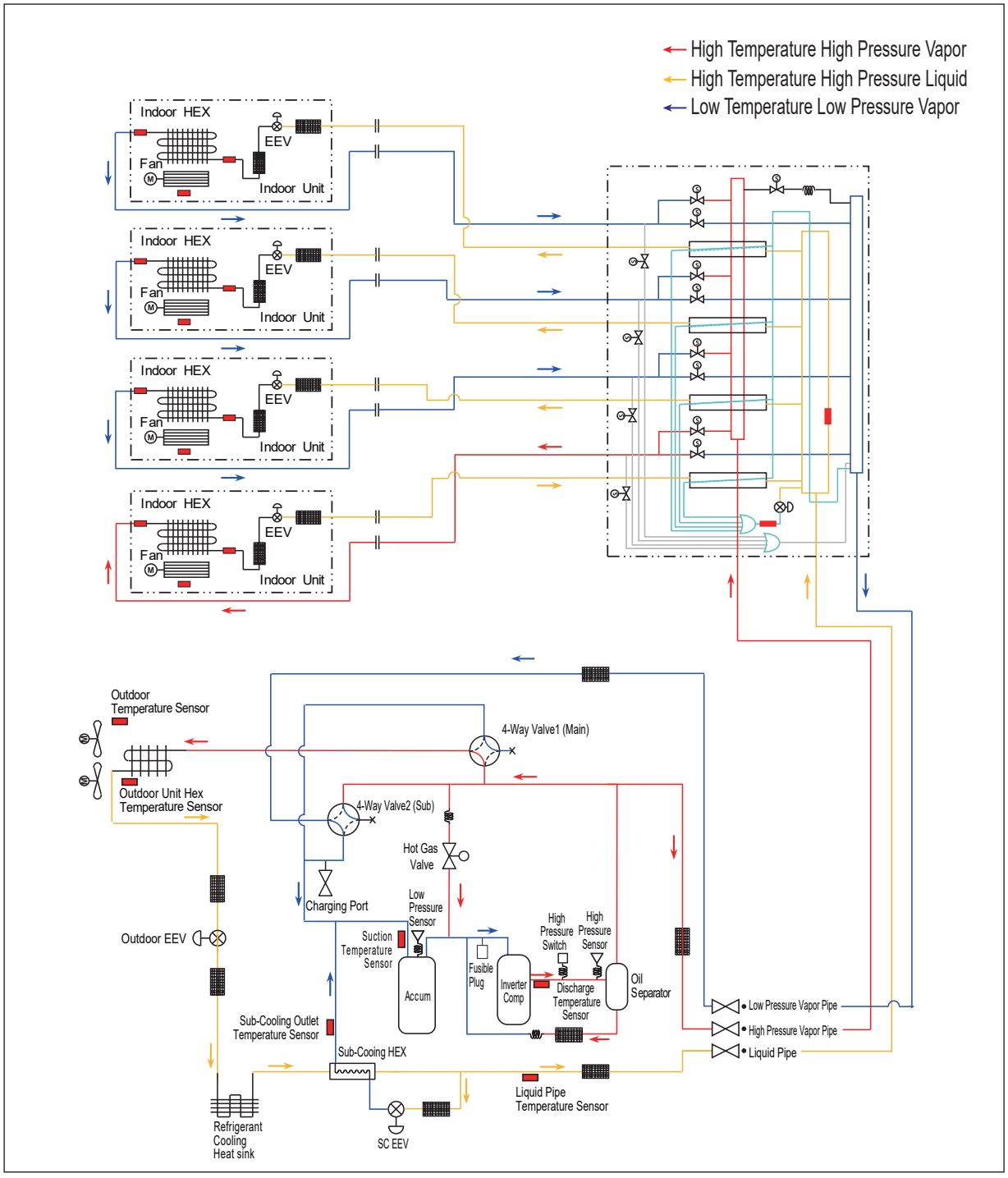
REFRIGERANT FLOW DIAGRAMS

ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0

Heat Recovery - Cooling-based Simultaenous Operation

Figure 20: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Recovery - Cooling-based Simultaneous Operation Refrigerant Flow Diagram.

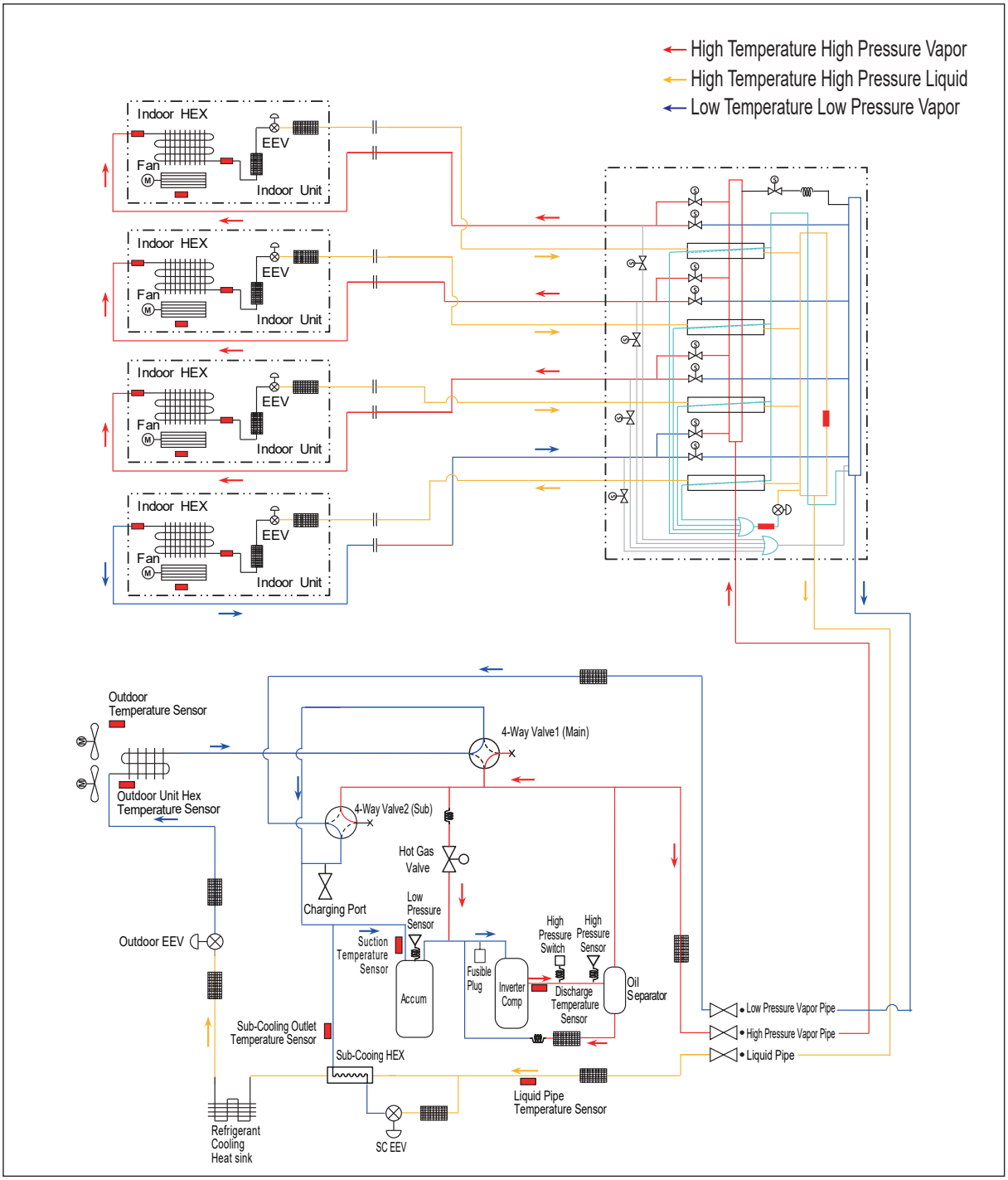
Heat Recovery – Cooling-based Simultaneous Operation



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

Figure 21: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Recovery - Heating-based Simultaneous Operation Refrigerant Flow Diagram.

Heat Recovery – Heating-based Simultaneous Operation



REFRIGERANT FLOW DIAGRAMS

ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0

Heat Recovery - Balanced Simultaneous Operation

Figure 22: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Recovery - Balanced Simultaneous Operation Refrigerant Flow Diagram.

Heat Recovery – Balanced Simultaenous Operation

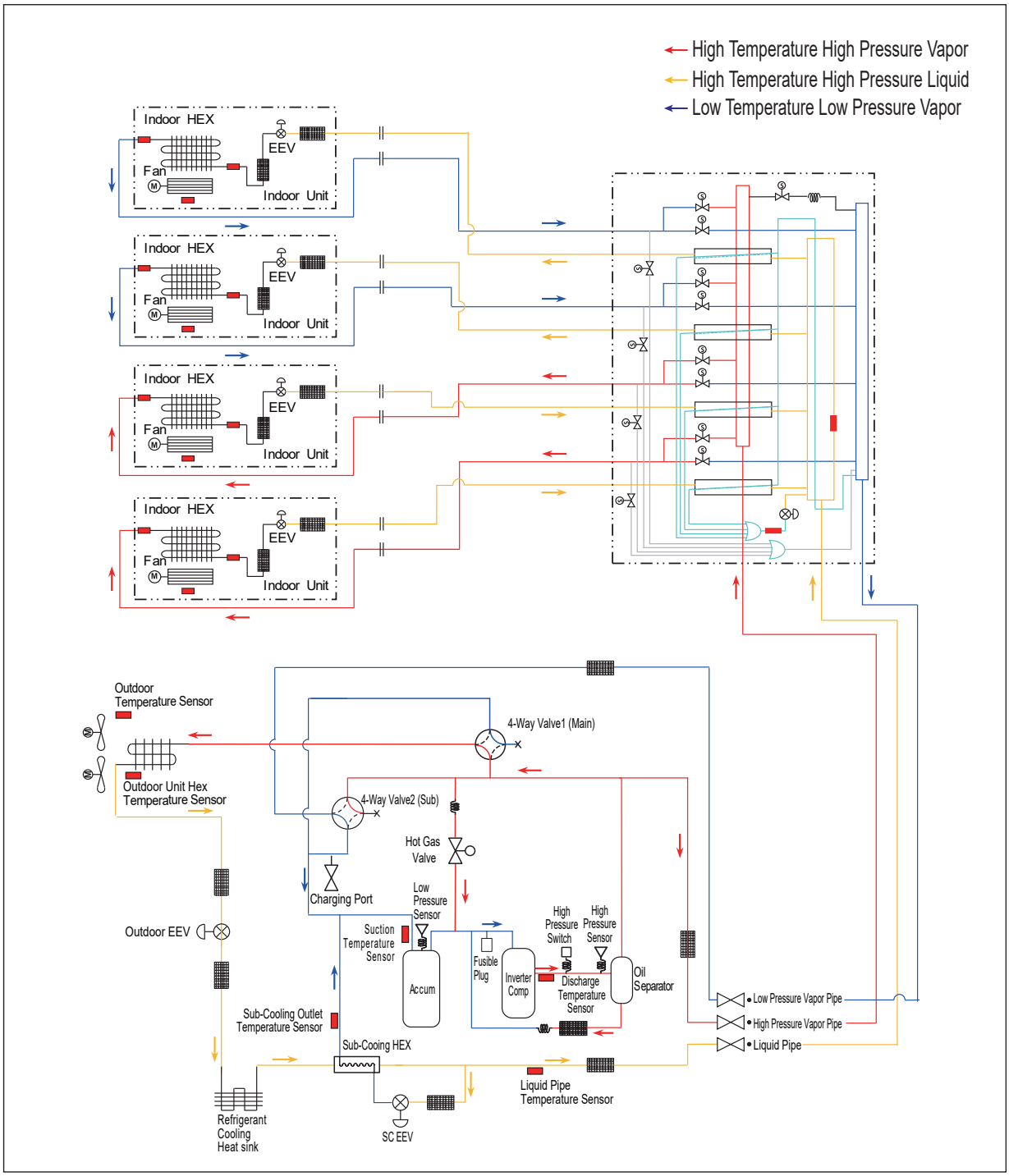
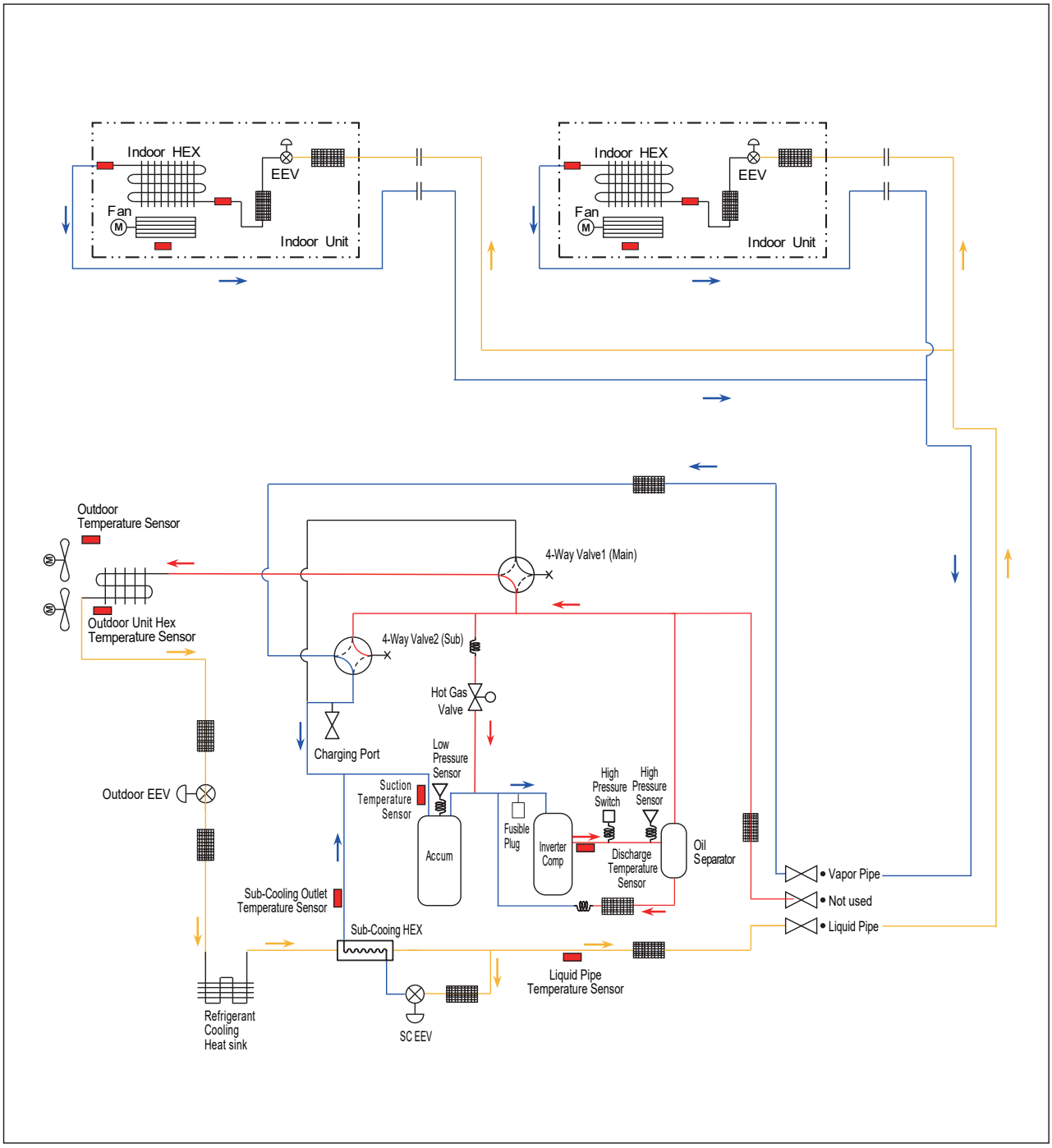


Figure 23: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Pump - Cooling Mode Refrigerant Flow Diagram.

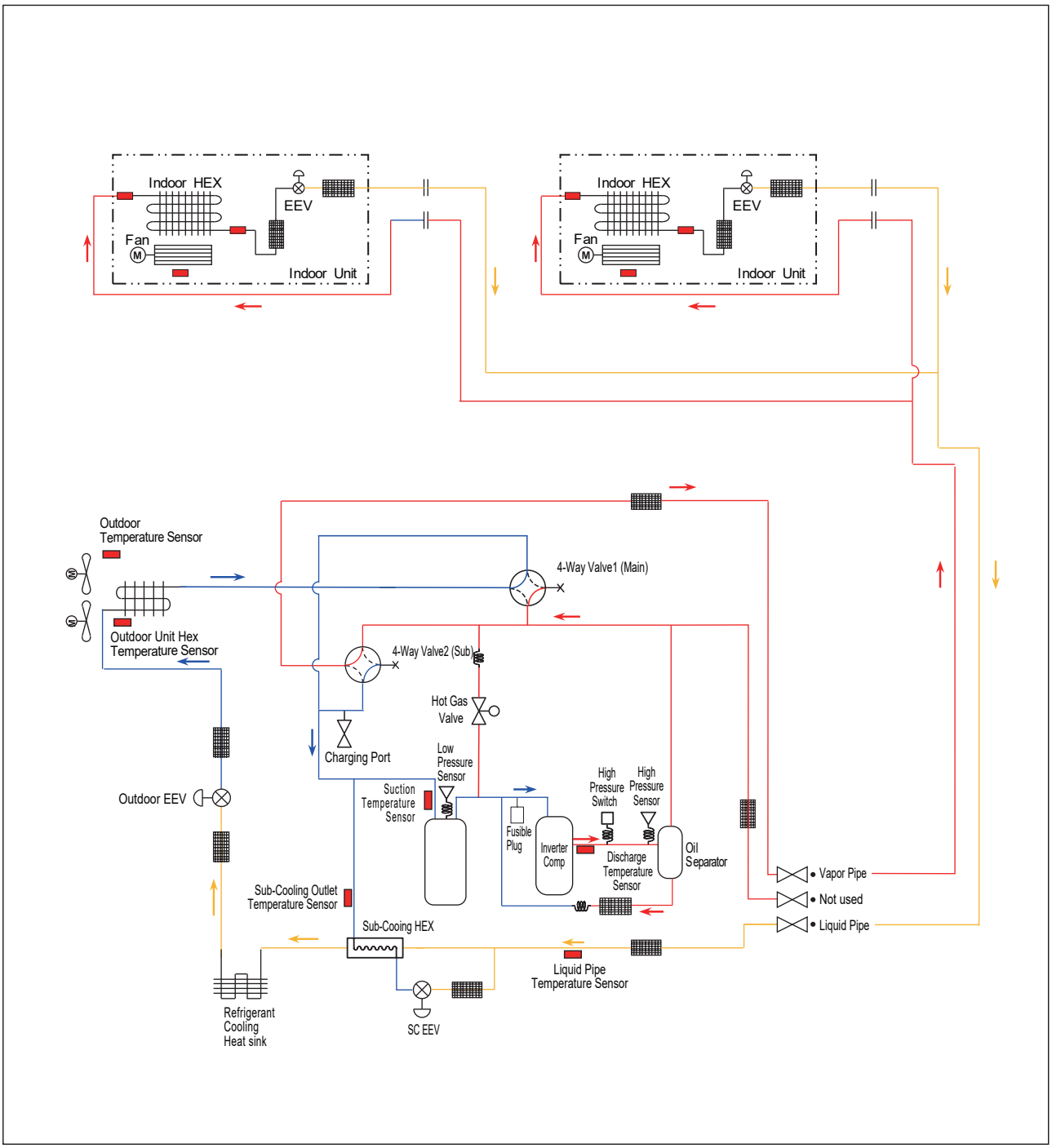
Heat Pump – Cooling Mode



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

Figure 24: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Pump - Heating Mode Refrigerant Flow Diagram.

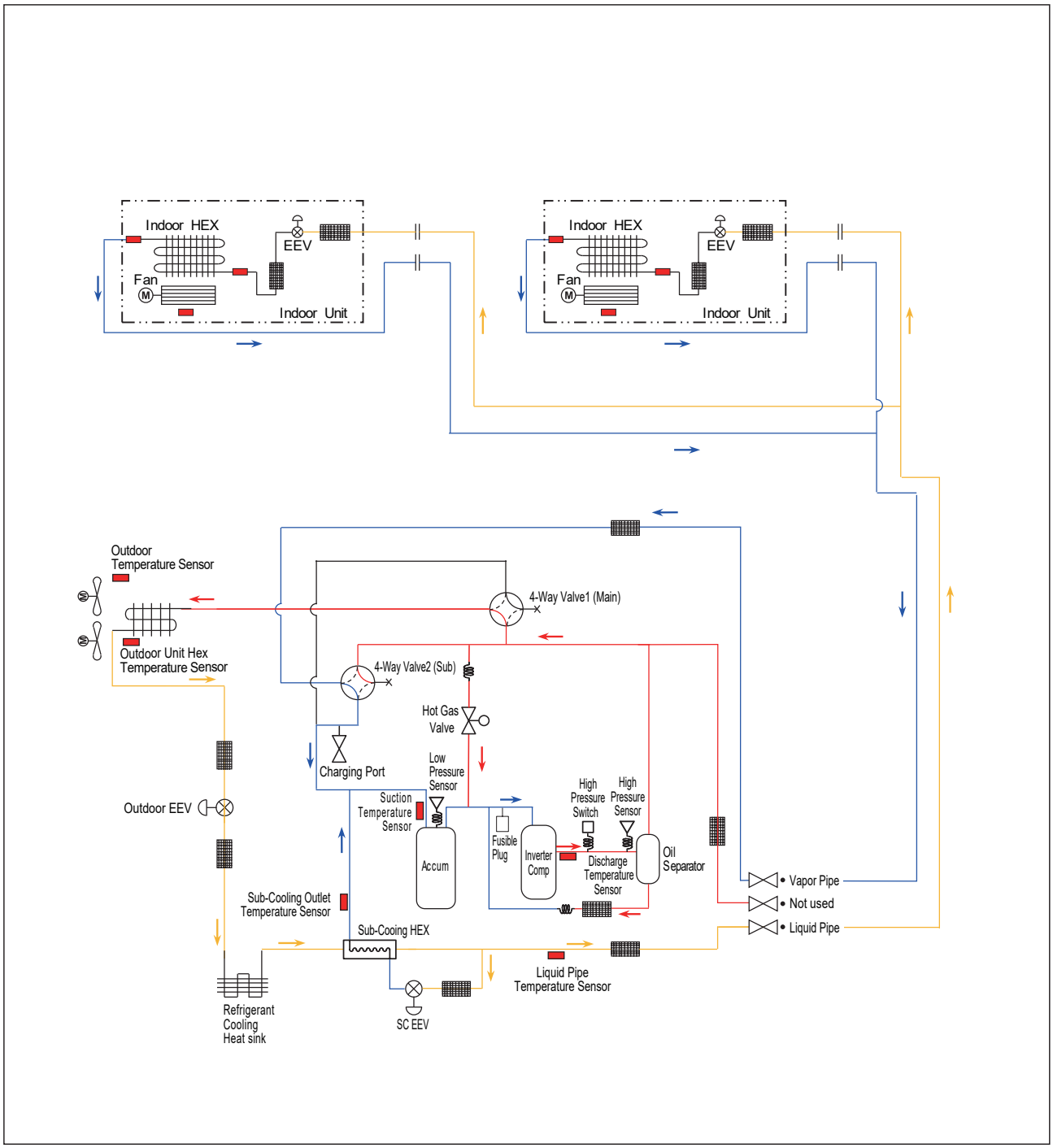
Heat Pump – Heating Mode



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

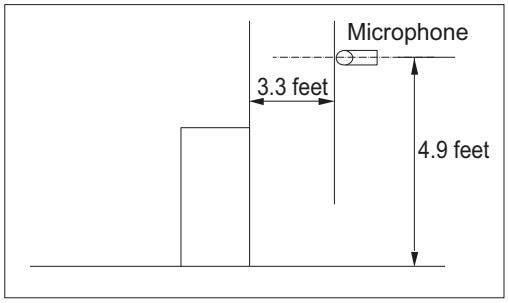
Figure 25: ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Heat Pump - Oil and Defrost Operation Refrigerant Flow Diagram.

Heat Pump – Oil Return and Defrost Operation



Remarks				
	Pressure Sensor	Temperature Sensor	Solenoid Valve	SVC Valve
	Pressure Switch	EEV	Strainer	Fusible Plug

Figure 26: Combination Outdoor Unit Sound Pressure Level Measurement Location.



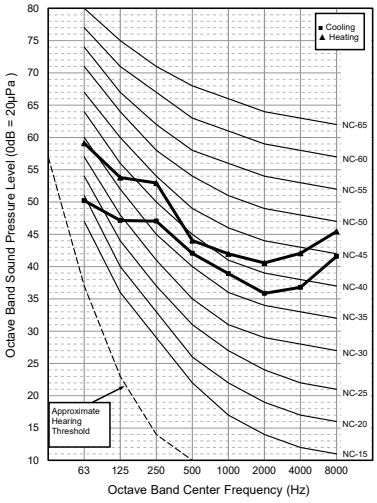
- Measurement taken 4.9' above finished floor, and at a distance of 3.3' from face of fan discharge.
- Measurements taken with no attenuation and units operating at full load normal operating condition.
- Sound level will vary depending on a range of factors such as construction (acoustic absorption coefficient) of a particular area in which the equipment is installed.
- Sound levels are measured in dB(A)±3.
- Tested in anechoic chamber per ISO Standard 3745.
- Off-Peak Operation: Logic takes advantage of lower outdoor ambient temperatures and limits the outdoor unit fan speed during nighttime operation to lower the unit sound level.

Table 11: LGRED Combination Outdoor Unit Sound Pressure Levels (dB[A]).

Model Nos.	Cooling	Heating
ZRUM036GSS0	50	52
ZRUM048GSS0	53	54
ZRUM060GSS0	57	59

Figure 27: ZRUM036GSS0 and ZRUM048GSS0 Combination Outdoor Unit Cooling and Heating Sound Pressure Level Diagram.

ZRUM036GSS0



ZRUM048GSS0

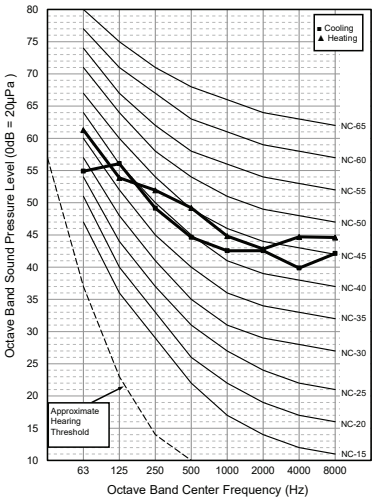
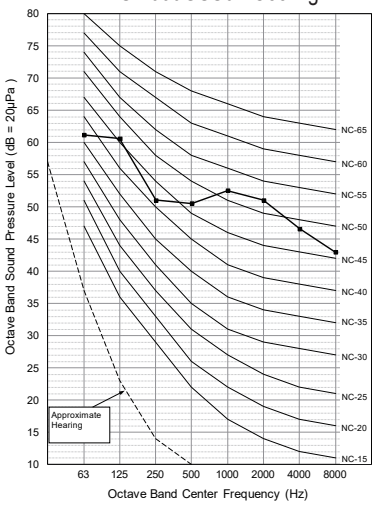


Figure 28: ZRUM060GSS0 Combination Outdoor Unit Cooling and Heating Sound Pressure Level Diagrams.

ZRUM060GSS0 - Cooling



ZRUM060GSS0 - Heating

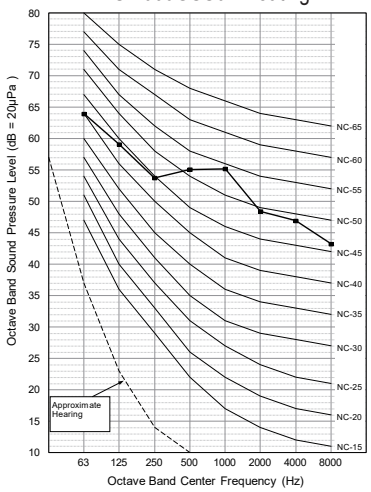


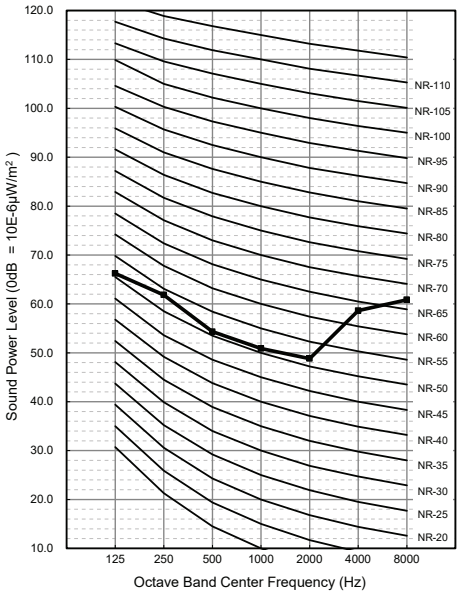
Table 12: Combination Outdoor Unit Sound Power Levels (dB[A]).

Model Nos.	Sound Power Levels (dB[A])
ZRUM036GSS0	66
ZRUM048GSS0	67
ZRUM060GSS0	69

- Data is valid under diffuse field conditions.
- Data is valid under nominal operating conditions.
- Sound power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
- Sound level will vary depending on a range of factors such as construction (acoustic absorption coefficient) of a particular area in which the equipment is installed.
- Reference acoustic intensity: 0dB = 10E-6μW/m^2

Figure 29: ZRUM036GSS0 and ZRUM048GSS0 Combination Outdoor Unit Sound Power Level Diagrams.

ZRUM036GSS0



ZRUM048GSS0

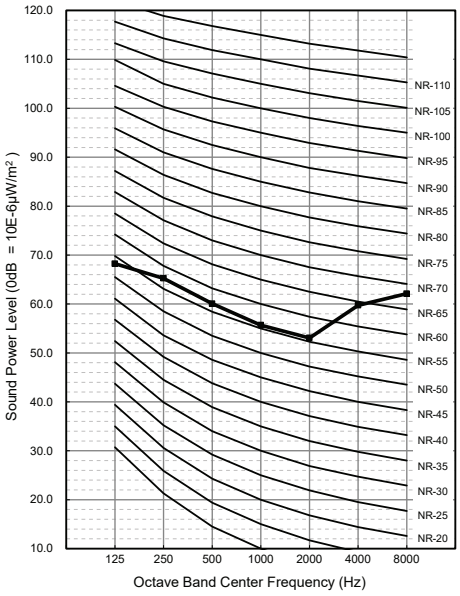
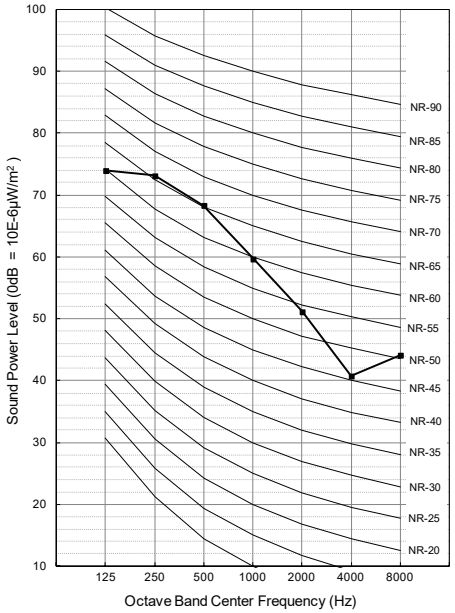


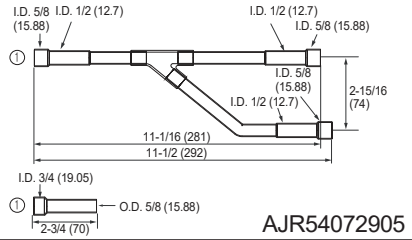
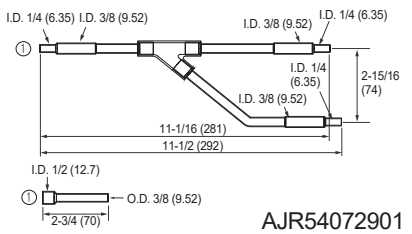
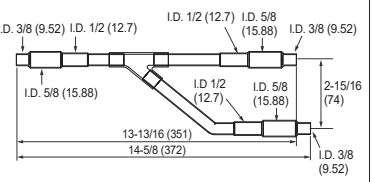
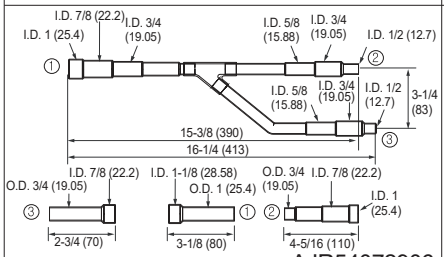
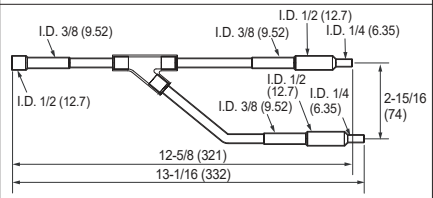
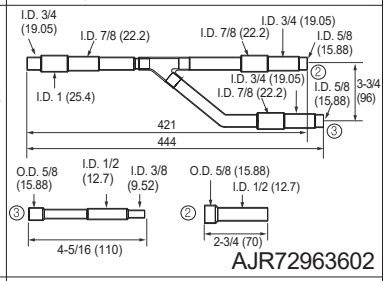
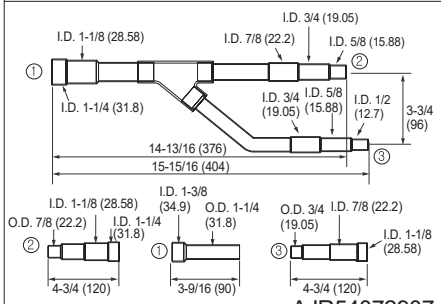
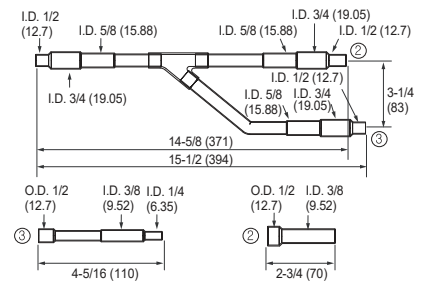
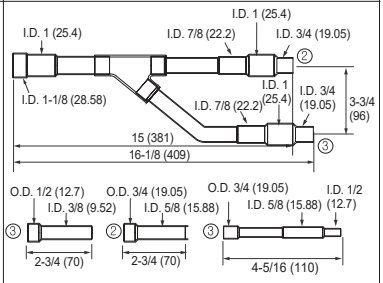
Figure 30: ZRUM060GSS0 Combination Outdoor Unit Sound Power Level Diagram.

ZRUM060GSS0



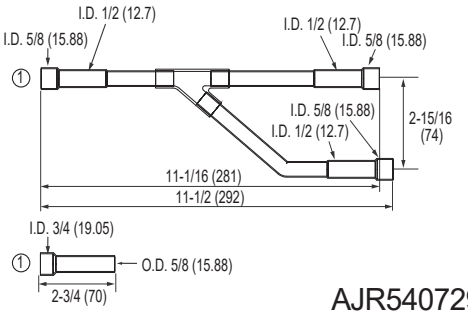
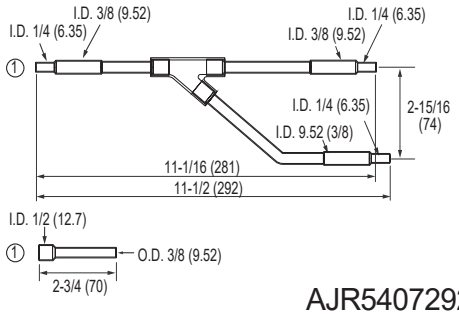
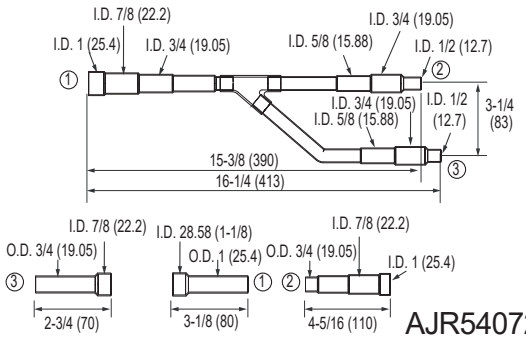
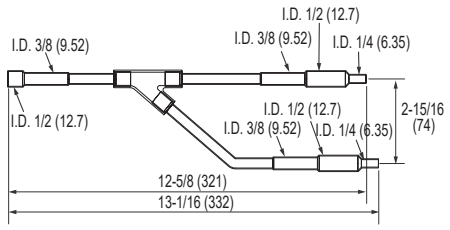
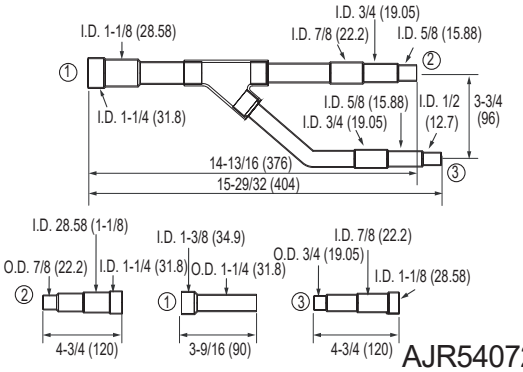
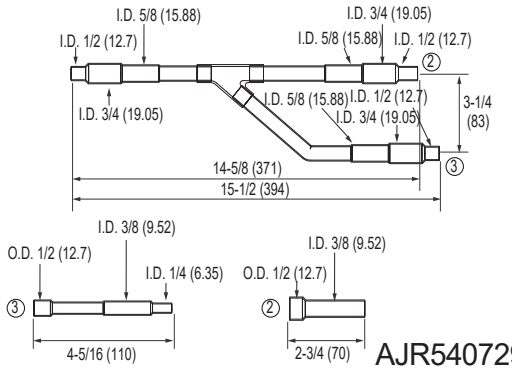
Y-branches for Heat Recovery Operation

Unit: Inch (mm)

ARBLB01621		Liquid Pipe	High-Pressure Vapor Pipe
	 AJR54072905	 AJR54072901	 AJR72963601
ARBLB03321	Low-Pressure Vapor Pipe	Liquid Pipe	High-Pressure Vapor Pipe
	 AJR54072906	 AJR54072902	 AJR72963602
ARBLB07121	Low-Pressure Vapor Pipe	Liquid Pipe	High-Pressure Vapor Pipe
	 AJR54072907	 AJR54072903	 AJR72963603

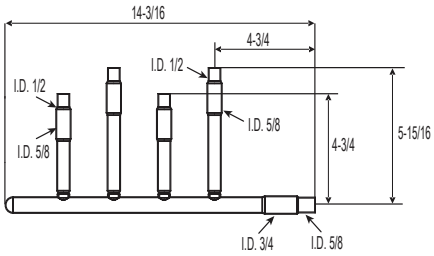
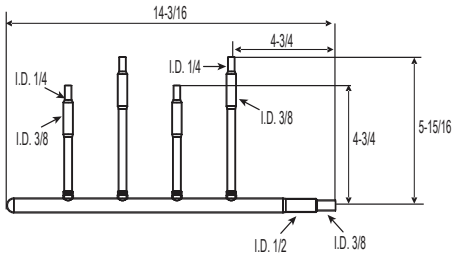
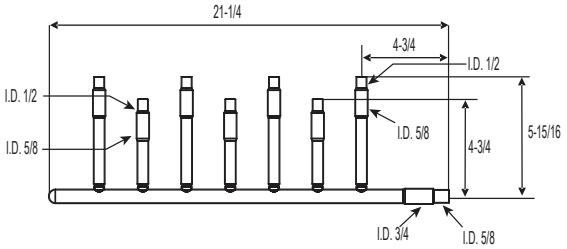
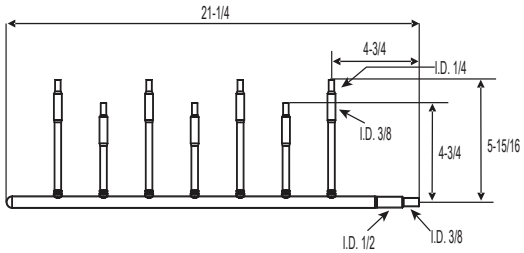
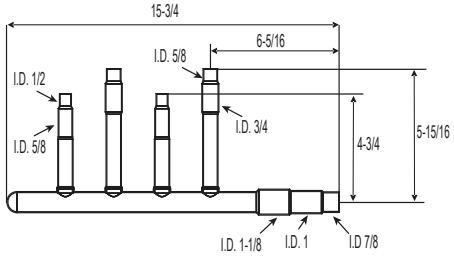
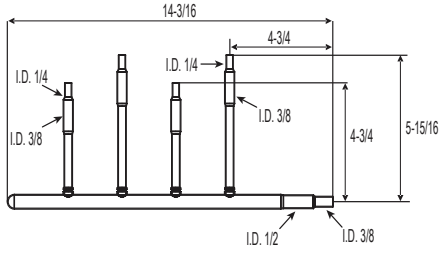
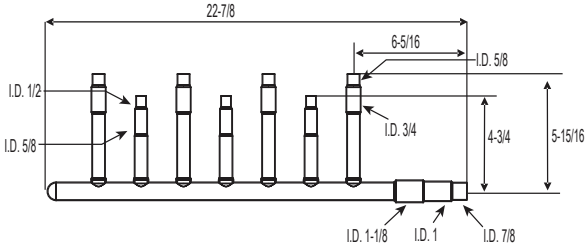
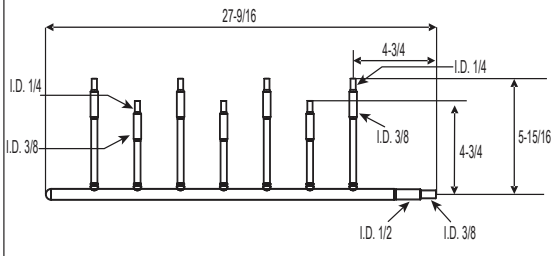
Y-branches for Heat Pump Operation

(Unit: Inch [mm])

Models	Pipe	
	Vapor Pipe	Liquid Pipe
ARBLN01621	 AJR54072929	 AJR54072927
ARBLN03321	 AJR54072930	 AJR54072928
ARBLN07121	 AJR54072933	 AJR54072931

Headers

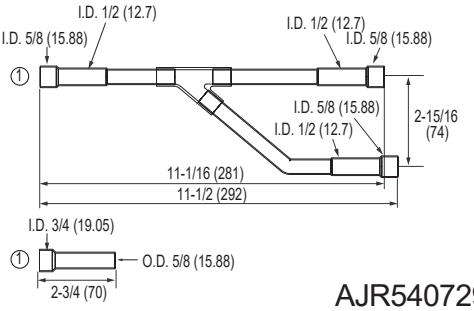
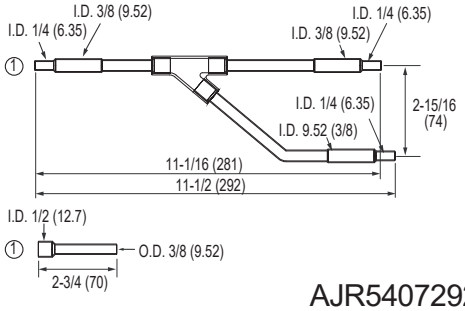
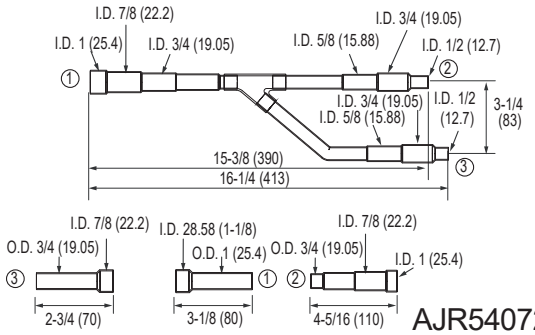
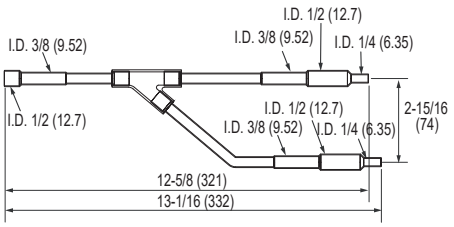
Unit: Inch

Models	Vapor pipe	Liquid pipe
4 branch ARBL054		
7 branch ARBL057		
4 branch ARBL104		
7 branch ARBL107		

Combining Heat Recovery Ports for Large Indoor Units

It is necessary to combine two ports on a system designed for heat recovery operation when installing a single indoor unit with a capacity exceeding 54,000 Btu/h. Two neighboring heat recovery ports are combined using a reverse Y-branch that is then connected to the one large indoor unit.

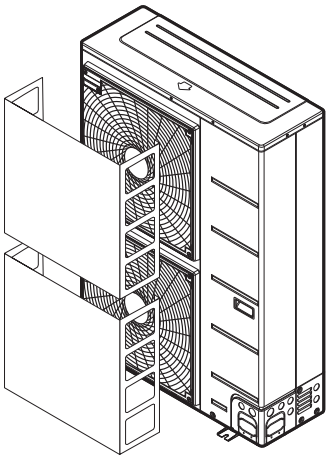
(Unit: Inch [mm])

Models	Pipe	
	Vapor Pipe	Liquid Pipe
ARBLN01621	 AJR54072929	 AJR54072927
	Vapor Pipe	Liquid Pipe
ARBLN03321	 AJR54072930	 AJR54072928

Low Ambient Wind Baffle Kit

(ZLABGP04A)

Optional low ambient baffle kits allow for Multi V S outdoor unit operation down to -9.9°F in cooling mode. When used with heat recovery operation, low ambient cooling to -9.9°F is possible only when all indoor units are operating in cooling mode. The low ambient wind baffle kit does not impact synchronous operating range.



Includes:

- 20 Gauge Paint Grip Wind Baffle in Soft Dove Grey
- Four (4) Zinc-Plated Pan-Head Phillips Screws, #8 x 1/2"

Use two (2) ZLABGP04A kits with the 3-ton ZRUM036GSS0, 4-ton ZRUM048GSS0, and 5-ton ZRUM060GSS0.

Contact an LG Sales Representative for more information.

LG Monitoring View (LGMV) Diagnostic Software and Cable

LG Monitoring View (LGMV) is a maintenance and troubleshooting tool for Multi V™ air conditioning systems. LGMV formats are available for computer or mobile phone use.

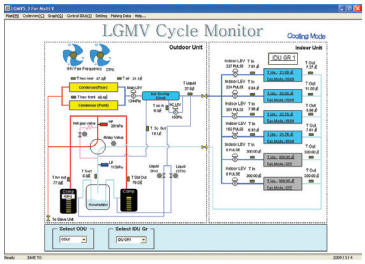
The main screen for LGMV allows the user to view the following real time data:

- Actual inverter compressor speed
- Target inverter compressor speed
- Actual outdoor fan speed
- Target outdoor unit fan speed
- Actual superheat
- Target superheat
- Actual subcooler circuit superheat
- Target subcooler circuit superheat
- Main EEV position
- Subcooling EEV position
- Inverter compressor current transducer value
- Outdoor air temperature
- Actual high pressure/saturation temperature
- Actual low pressure/saturation temperature
- Suction temperature
- Inverter compressor discharge temperature
- Constant speed compressor discharge temperature
- Front outdoor coil pipe temperature
- Back outdoor coil pipe temperature
- Liquid line pipe temperature
- Subcooler inlet temperature
- Subcooler outlet temperature
- Average indoor unit (IDU) pipe temperature
- Inverter compressor operation indicator light
- Four-way reversing valve operation indicator light
- Pressure graph showing actual low pressure and actual high pressure levels
- Error code display
- Operating mode indicator
- Target high pressure
- Target low pressure
- PCB (printed circuit board) version
- Software version
- Installer name
- Model no. of outdoor units
- Site name
- Total number of connected indoor units
- Communication indicator lights
- Indoor unit capacity
- Indoor unit operating mode
- Indoor unit fan speed
- Indoor unit EEV position
- Indoor unit room temperature
- Indoor unit inlet pipe temperature
- Indoor unit outlet pipe temperature
- Indoor unit error code

Additional screens can be accessed by tabs on the main screen

1. Cycleview: Graphic of internal components including
   - Compressors showing actual speeds
   - EEVs
   - Indoor Units
   - Liquid injection valves
   - Temperature and pressure sensors
   - Four-way reversing valve
   - Outdoor fans showing status and speeds
2. Graph:
   Full screen graph of actual high and low pressures and high and low pressure limits. A sliding bar enables user to go back in time and view data.
3. Control IDU: Enables user to turn on all IDUs default setpoints of 86°F in heat mode or 64°F in cool mode.
4. Setting: Converts metric values to imperial values.
5. Making Data: Recording of real time data to a separate file created to be stored on the user's computer.
6. Loading Data: Recorded data from a saved ".CSV" file can be loaded to create an LGMV session.
7. Electrical Data: Screen is changed to show the following:
   - Inverter compressor
     - Amps / Volts / Power Hz
     - Inverter control board fan Hz
   - Constant compressor
     - Current transducer value
     - Phase

Figure 31: Sample Cycleview (Computer View Example).



In lieu of connecting to the outdoor unit, user has the option to connect to the indoor unit with a connector kit. When connected through the indoor unit, user will not be able to record data.

This software can be used to both pre-set-up new systems and troubleshoot existing systems. LGMV data can be recorded to a ".CSV" file and emailed to an LG representative to assist with diagnostic evaluations.

LGMV is available in different formats. Contact your LG Sales Representative for system requirements and for more information.

ThinQ

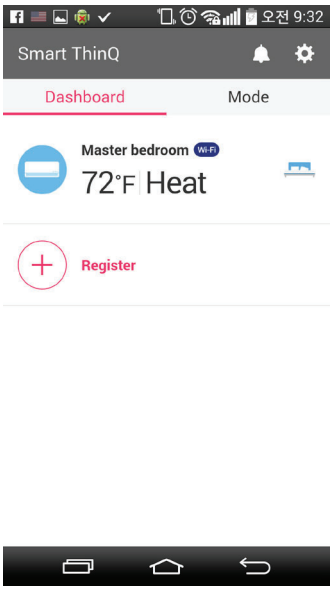
LG ThinQ is a built-in Wi-Fi module, along with a free smart phone app that provides monitoring and remote control capabilities for use with certain LG indoor units. The app has the following features and benefits:

- Sign in to the app using LG credentials, or using Google® or Facebook® login credentials. Users only have to log in to the app once; the app remembers login details for subsequent logins.
- View current temperature settings of the air conditioning unit and change temperature, fan speed, and air flow direction from anywhere in the house or at a remote location (through the use of wireless connection). Multiple users can control the household air conditioning unit remotely.
- Monitor filter usage of the unit.
- Set up weekly schedules to start and stop air conditioner activity.
- Set up the unit to run in different Modes, depending on the user's schedule. Set up specific temperatures for when the user is home, away on vacation, or sleeping.
- Troubleshoot problems, and view tips on general maintenance of the system using the Smart Diagnosis function.

**Google is a registered trademark of Google Inc.; Facebook is a registered trademark of Facebook.*

Contact your LG Sales Representative or visit www.lghvac.com for system requirements, how to download the app, a user's manual, or other information.

Figure 32: Example of an LG Smart ThinQ Screen (appearances my differ depending on version of software).

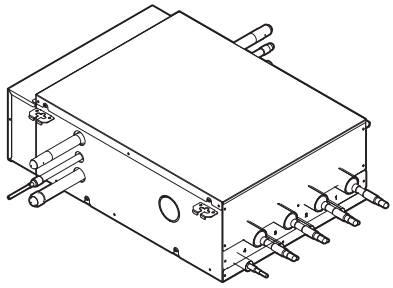


HEAT RECOVERY UNIT PRODUCT DATA

Mechanical Specifications on page 52
General Data on page 53
Electrical Data on page 54
Dimensions on page 55
Wiring Diagram on page 56
Refrigerant Flow Diagram on page 58
Acoustic Data on page 59
Accessories on page 60

Multi V Heat Recovery Units

Figure 33: Four-Port Heat Recovery Unit.



General

Multi V heat recovery units are for use with R32 Multi V i, Multi V Water and Multi V S heat recovery outdoor units to permit simultaneous heating and cooling operation. Heat recovery units have two (2), three (3), or four (4) ports for connections to indoor units. Each port is capable of connecting from one (1) indoor unit up to eight (8) indoor units up to a maximum nominal capacity of ≤60 MBh. When multiple indoor units are connected to one port, all indoor units on that port must operate in the same mode (cooling or heating). Individual indoor units ≥60 MBh nominal capacity must use two (2) neighboring heat recovery unit ports twinned together using a reverse Y-branch kit. Connect largest indoor unit to first port of the heat recovery unit. Each heat recovery unit can support a maximum capacity (sum of ports) of up to 230 MBh.

Heat recovery ports can operate in heating or cooling mode independently, regardless of the mode of any other port on the unit or in the system except where heat recovery unit ports are twinned.

Casing and Construction

Heat recovery units are completely factory assembled, internally piped, wired, and are designed for indoor installation. Casing is constructed of galvanized steel, and houses piping, valves and controls to divert refrigerant controlling each port to operate in either heating or cooling mode. Heat recovery units contain one double spiral subcooling heat exchanger per port and are internally insulated. Main and secondary condensate connections are provided.

Refrigerant Valves

Each heat recovery port is circuited with two two-position motorized valves to control R32 refrigerant flow path to allow indoor units to operate in heating or cooling mode. R32 heat recovery units include built-in shutoff valves.

Refrigerant Piping

Units can be piped in series and / or parallel to optimize cost between material and labor. Up to 16 heat recovery units can be piped in series, parallel, or a combination of series and parallel to optimize cost between material and labor. Any series string of heat recovery ports/units can connect up to 230 MBh of indoor unit nominal capacity (series string is defined a heat recovery units piped in series).

Heat recovery unit piping limitations also depend on the allowable piping parameters of the outdoor unit installed.

- Indoor units up to 131 equivalent feet of piping length from the heat recovery unit to which it is connected.
- Indoor units up to 295 equivalent feet of piping length from the first branch.
- Difference between highest and lowest elevation indoor units piped to separate parallel heat recovery units (HRUs) up to 131 feet in elevation.
- Difference between highest and lowest heat recovery units piped in parallel up to 98 feet in elevation.
- Difference between highest and lowest elevation heat recovery units piped in series up to 16 feet in elevation.
- Elevation difference of series connected heat recovery units cannot exceed 16 feet.

All refrigerant lines from the outdoor unit to the heat recovery units, and from the heat recovery units to the indoor units must be field insulated separately.

Electrical

Heat recovery units require 208-230V, 1-phase, 60 Hz electrical power, and are capable of operation within ±10% of nominal voltage.

Controls

Heat recovery units include factory-installed control boards with integral microprocessors. Heat recovery unit control boards communicate with the main control board in the outdoor unit and interface with the VRF equipment controls system. The control circuit between the indoor units, heat recovery units and the outdoor unit is RS-485 daisy chain communication over two-conductor, twisted, stranded, shielded, 18 AWG cable.

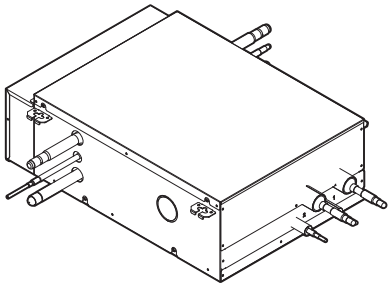


Figure 34: Two-Port Heat Recovery Unit.

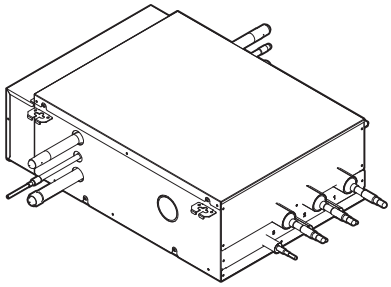


Figure 35: Three-Port Heat Recovery Unit.

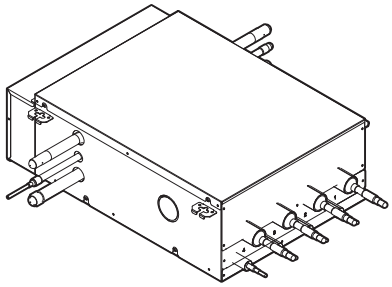


Figure 36: Four-Port Heat Recovery Unit.

NOTICE

Heat recovery units can only be used with LG systems piped for heat recovery operation.

Table 13: Heat Recovery Unit Specifications.

Model			PRHR023C	PRHR033C	PRHR043C
Number of Ports			2	3	4
Max. Connectable No. of Indoor Units			16	24	32
Max. Connectable No. of Indoor Units on each port			8	8	8
Max. Port Capacity (each port)		Btu/h	60,000	60,000	60,000
Max. Unit Capacity (sum of ports)		Btu/h	120,000	180,000	230,000
Net Weight		lbs.	75	80.2	85.8
Shipping Weight		lbs.	98.5	104.7	110.2
Dimensions (W x H x D)		Inches	25-25/32 x 10-5/8 x 37-5/32		
Casing			Galvanized Steel Plate		
Connecting Pipes	To Indoor Units	Liquid Pipe (inches)	Ø3/8 – Ø1/4		
		Vapor Pipe (inches)	Ø5/8 – Ø1/2		
	To Outdoor Units	Liquid (inches)	Ø3/8	Ø1/2	Ø5/8
		Low Pressure Vapor (inches)	Ø7/8	Ø1-1/8	Ø1-1/8
		High Pressure Vapor (inches)	Ø3/4	Ø7/8	Ø7/8
Condensate Line (in., O.D.)			1	1	1
Insulation Material			Polyethylene Foam		

Table 14: Heat Recovery Unit Electrical Data.

Unit Model No.	Voltage Range	Rated Amps	MCA	MFA	Power Supply			Power Input (W)	
					Hz	Volts	Phase	Cooling	Heating
PRHR023C	187-253	0.1	0.21	15	60	208-230	1	49.2	46.6
PRHR033C									
PRHR043C									

MCA : Minimum Circuit Ampacity.
MFA : Maximum Fuse Amps.

Units are suitable for use on an electrical system where voltage supplied to unit terminals is within the listed range limits.
Select wire size based on the larger MCA value.
Instead of a fuse, use the circuit breaker.

Figure 37: PRHR023C, PRHR033C and PRHR043C Dimensions.

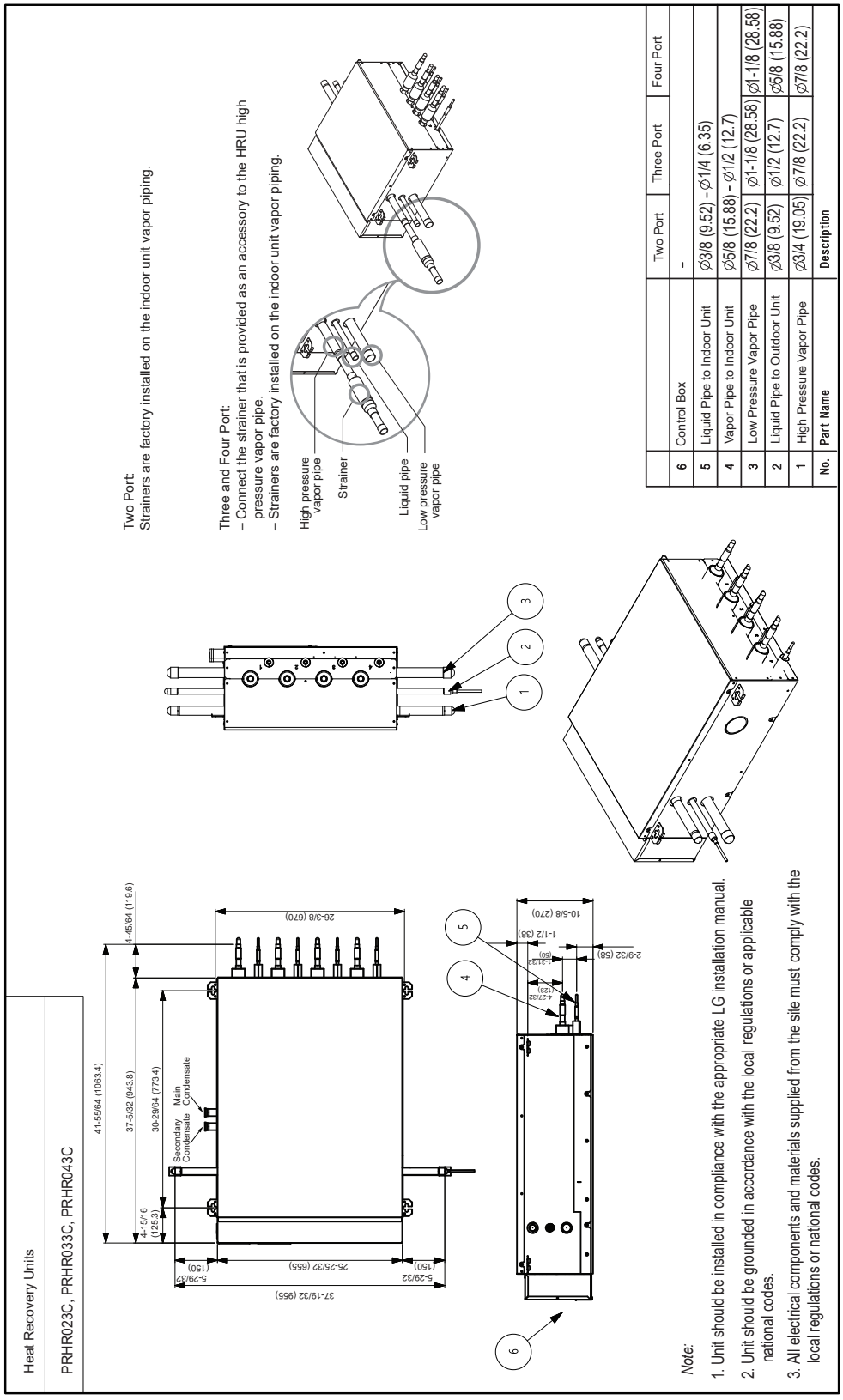


Figure 38: PRHR023C, PRHR033C, and PRHR043C Wiring Diagram.

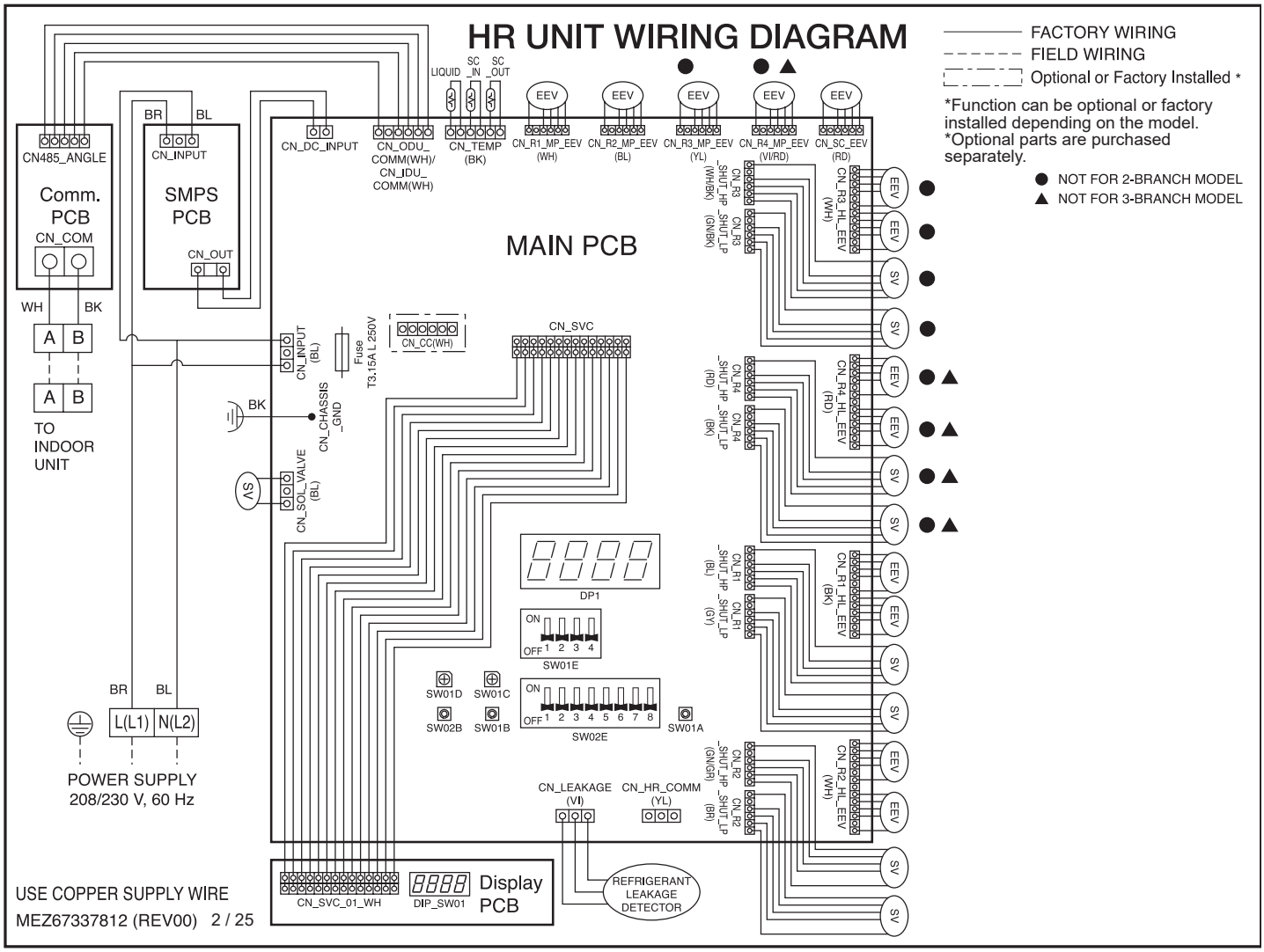
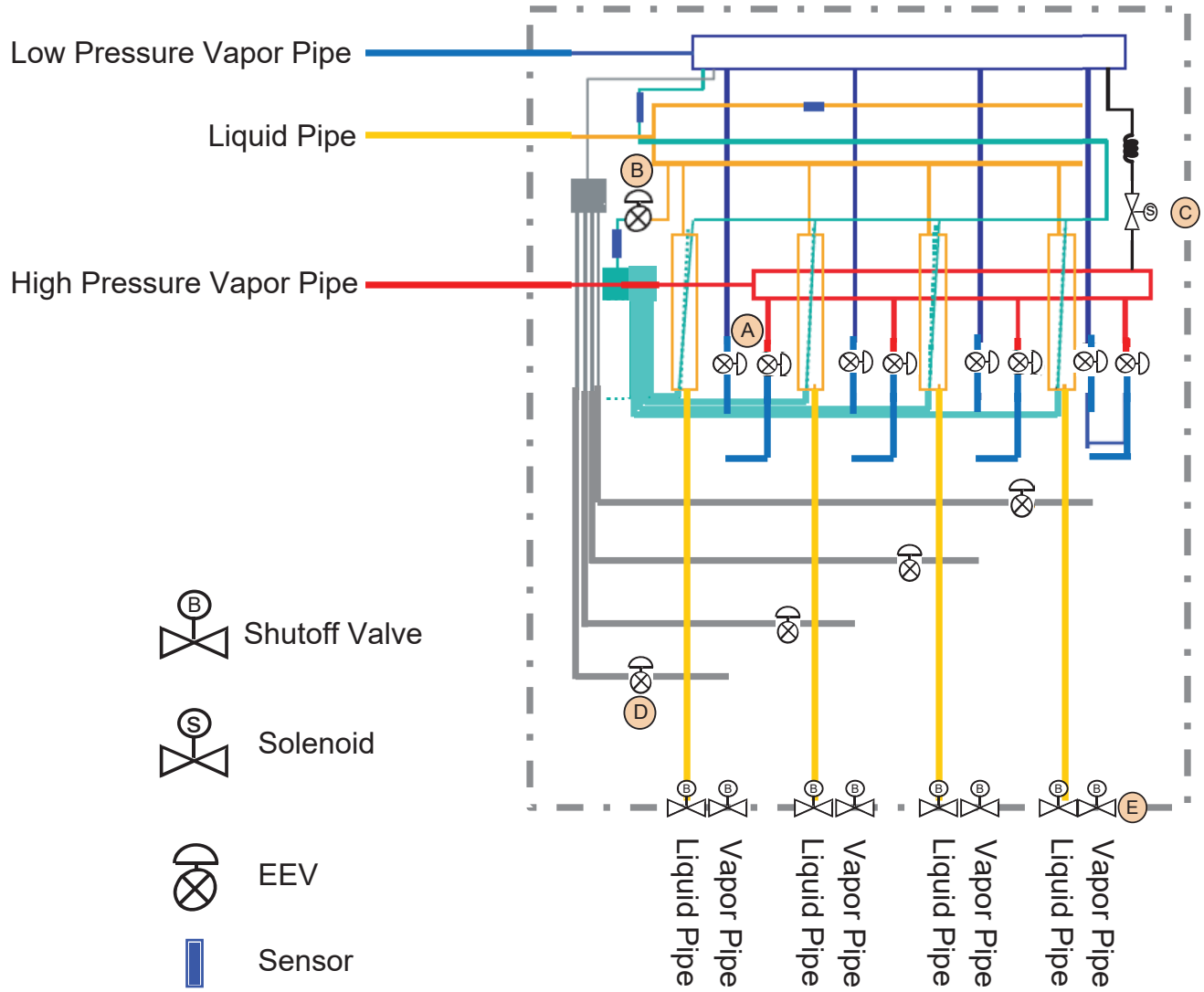


Table 15: PRHR023C, PRHR033C, and PRHR043C Wiring Diagram.

Terminal	Description
Main PCB	
CN_R1_MP	EEV 01 (Bypass for Room 1)
CN_R2_MP	EEV 02 (Bypass for Room 2)
CN_R3_MP	EEV 03 (Bypass for Room 3)
CN_R4_MP	EEV 04 (Bypass for Room 4)
CN_R1_HL	EEV 01 Low / High (For Room 1)
CN_R2_HL	EEV 02 Low / High (For Room 2)
CN_R3_HL	EEV 03 Low / High (For Room 3)
CN_R4_HL	EEV 04 Low / High (For Room 4)
CN_SC	Sub Cooling EEV
CN_TEMP(SC_OUT)	Sensor, Sub Cooling Out
CN_TEMP(SC_IN)	Sensor, Sub Cooling In
CN_TEMP(LIQUID)	Sensor, Liquid Receiver
CN_SOL_VALVE	Solenoid Valve Bypass 01
CN_R1_SHUT_HP	Shut Off Valve High (for Room 1)
CN_R1_SHUT_LP	Shut Off Valve Low (for Room 1)
CN_R2_SHUT_HP	Shut Off Valve High (for Room 2)
CN_R2_SHUT_LP	Shut Off Valve Low (for Room 2)
CN_R3_SHUT_HP	Shut Off Valve High (for Room 3)
CN_R3_SHUT_LP	Shut Off Valve Low (for Room 3)
CN_R4_SHUT_HP	Shut Off Valve High (for Room 4)
CN_R4_SHUT_LP	Shut Off Valve Low (for Room 4)
DIP Switch Settings	
SW01E	Setting, EEV Number (When Manual Address)
	Setting, Valve Number of Zoning (When Auto Address)
SW02E(1)	Selecting, Auto Address (↓) or Manual Address (↑)
SW02E(2~4)	Setting, Total Number of Indoor Units Connected
SW02E(5)	Setting, Slave PCB
SW02E(6)	Setting, EEPROM Reset
SW02E(7~8)	Setting, Mode (Zoning, etc.)
SW01C	Setting, HR Unit Number
	Setting, Indoor Units Number of Zoning (When Manual Address)
SW01D	Setting, EEV Group
SW01B	Setting, the Address of indoor_1 (When Manual Address)
SW02B	Setting, the Address of indoor_10 (When Manual Address)

Figure 39: PRHR023C, PRHR033C, and PRHR043C Refrigerant Flow Diagram.



Ⓐ: Switches operation between cooling and heating using the two valves.

Ⓑ: Decreases sound following subcooling operation between the inlet of one indoor unit and outlet of another indoor unit during simultaneous operation.

Ⓒ: Prevents liquid from entering high pressure vapor valve and heat recovery unit cooling mode.

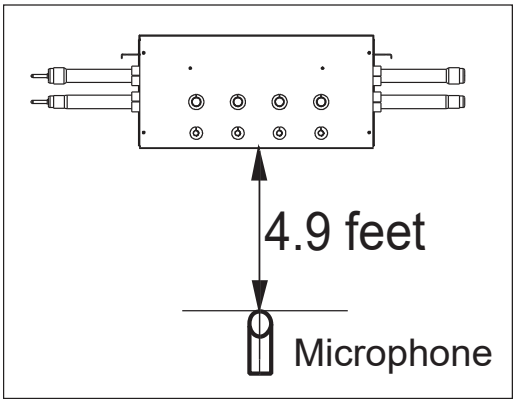
Ⓓ: Controls pressure between the high and low pressure vapor piping when operation mode switches.

Ⓔ: Blocks refrigerant flow if leak is detected.

NOTICE

Refrigerant diagram above represents the PRHR043C model. Appearances will differ depending on model.

Figure 41: Sound Pressure Measurement Location.



- Measurements are taken 4.9 ft. away from the center of the unit.
- Sound level will vary depending on a range of factors including the construction (acoustic absorption coefficient) of a particular room in which the unit was installed.
- Sound pressure levels are measured in dB(A) with a tolerance of ±3.
- Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745.

Operating Conditions:

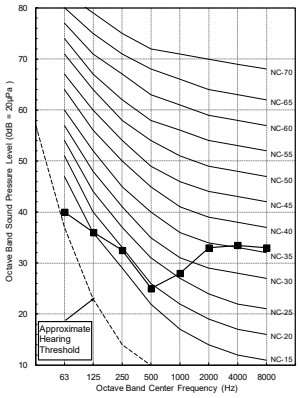
- Power source: 220V 60Hz
- Reference acoustic pressure: 0dB = 20μPa.
- Cooling: Indoor Temperature 80.6°F D.B., 66.2°F W.B., Outdoor Temperature 95°F D.B., 75.2°F W.B.
- Heating: Indoor Temperature 68°F D.B., 59°F W.B., Outdoor Temperature 44.6°F D.B., 42.8°F W.B.

Table 16: PRHR**3A Sound Pressure Levels.

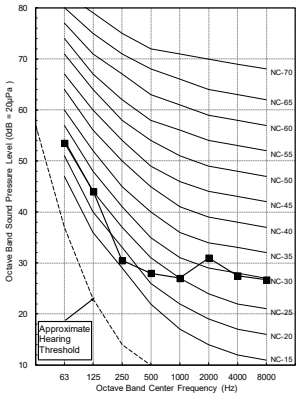
Operation Mode	Sound Pressure Levels dB(A)
Cooling	31
Heating	31
Simultaneous	38
Changeover From Cooling to Heating	33
Changeover From Heating to Cooling	38

Figure 40: PRHR**3C Sound Pressure Level Diagrams.

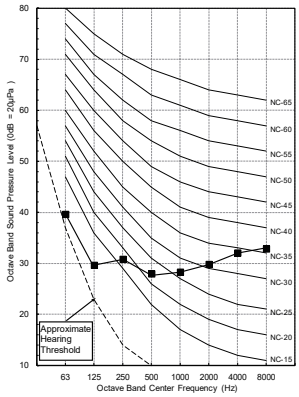
Cooling



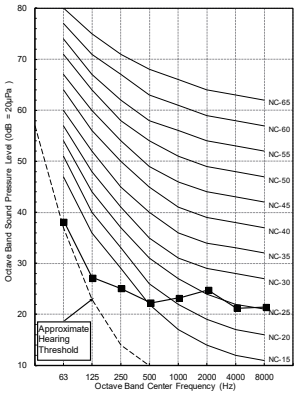
Heating



Changeover from Cooling to Heating



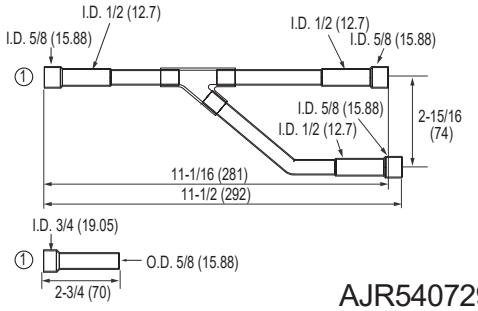
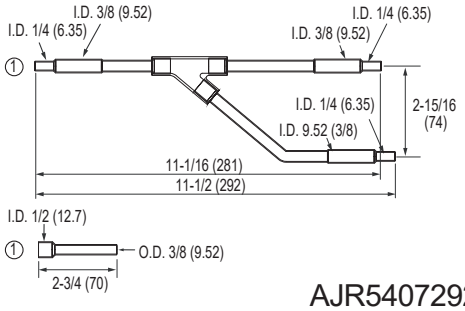
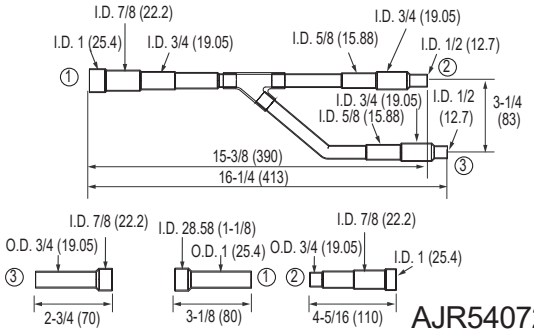
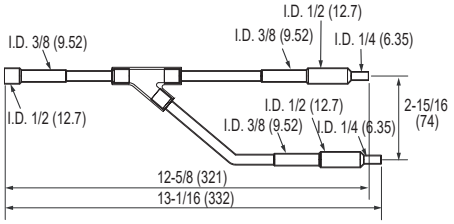
Changeover from Heating to Cooling



Combining Heat Recovery Ports for Large Indoor Units

It is necessary to combine two ports on a system designed for heat recovery operation when installing a single indoor unit with a capacity exceeding 54,000 Btu/h. Two neighboring heat recovery ports are combined using a reverse Y-branch that is then connected to the one large indoor unit.

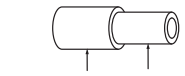
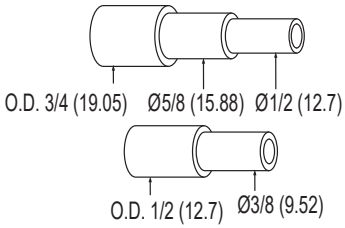
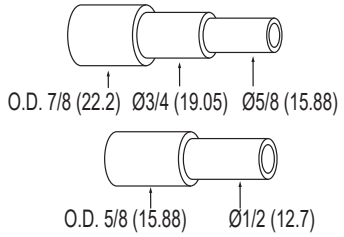
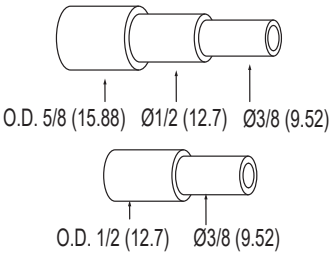
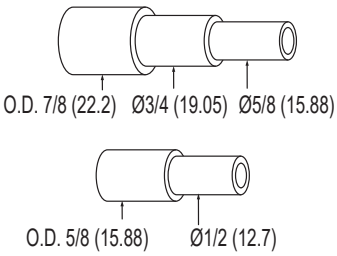
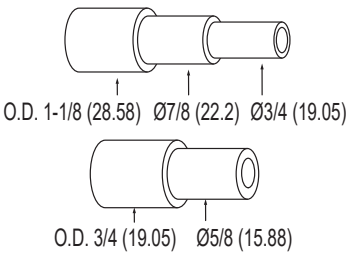
(Unit: Inch [mm])

Models	Pipe	
	Vapor Pipe	Liquid Pipe
ARBLN01621	 AJR54072929	 AJR54072927
	Vapor Pipe	Liquid Pipe
ARBLN03321	 AJR54072930	 AJR54072928

Reducers

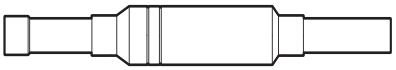
It may be necessary to install a reducer if the indoor unit piping or outdoor unit piping is too large or too small for the heat recovery unit connections.

Unit: Inches (mm)

Model		Liquid Piping	Vapor Piping	
			High Pressure	Low Pressure
Heat Recovery Unit Reducer	PRHR023C			
	PRHR033C PRHR043C			

Strainers

Strainers are provided as an accessory to three (3) and four (4) port heat recovery units, and are to be installed on the high pressure vapor pipe to the indoor unit.

Models		High Pressure Vapor Pipe
Strainer	For Three-Port and Four-Port Heat Recovery Units	

PERFORMANCE DATA

Cooling Capacity on page 63
Maximum Cooling Capacity on page 83
Heating Capacity on page 87
Maximum Heating Capacity on page 99
Correction Factors on page 101

COOLING CAPACITY

ZRUN024GSS0

Table 17: ZRUN024GSS0 Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-9.9	21.8	0.52	25.9	0.63	30.1	0.75	31.2	0.81	31.7	0.87	32.8	1.00	33.6	1.03
	-5	21.8	0.55	25.9	0.66	30.1	0.79	31.2	0.85	31.7	0.92	32.8	1.05	33.6	1.09
	0	21.8	0.57	25.9	0.69	30.1	0.82	31.2	0.89	31.7	0.95	32.8	1.09	33.6	1.13
	5	21.8	0.59	25.9	0.72	30.1	0.85	31.2	0.92	31.7	0.99	32.8	1.13	33.6	1.17
	10	21.8	0.61	25.9	0.74	30.1	0.87	31.2	0.94	31.7	1.02	32.8	1.17	33.6	1.21
	14	21.8	0.63	25.9	0.76	30.1	0.91	31.2	0.98	31.7	1.05	32.8	1.21	33.6	1.25
	20	21.8	0.64	25.9	0.78	30.1	0.92	31.2	0.99	31.7	1.07	32.8	1.23	33.6	1.27
	25	21.8	0.65	25.9	0.79	30.1	0.93	31.2	1.01	31.7	1.08	32.8	1.24	33.6	1.28
	30	21.8	0.66	25.9	0.80	30.1	0.94	31.2	1.02	31.7	1.09	32.8	1.25	33.6	1.30
	35	21.8	0.67	25.9	0.81	30.1	0.95	31.2	1.03	31.7	1.11	32.8	1.27	33.6	1.31
	40	21.8	0.67	25.9	0.82	30.1	0.96	31.2	1.04	31.7	1.12	32.8	1.28	33.6	1.33
	45	21.8	0.68	25.9	0.82	30.1	0.97	31.2	1.05	31.7	1.13	32.8	1.30	33.6	1.34
	50	21.8	0.69	25.9	0.83	30.1	0.98	31.2	1.06	31.7	1.14	32.8	1.31	33.6	1.36
	55	21.8	0.70	25.9	0.85	30.1	1.00	30.8	1.09	31.2	1.17	32.3	1.33	33.1	1.37
	60	21.8	0.72	25.9	0.88	29.7	1.04	30.1	1.13	30.5	1.21	31.6	1.37	32.3	1.38
	65	21.8	0.74	25.9	0.90	29.2	1.06	29.7	1.15	30.0	1.23	31.1	1.42	31.9	1.43
	70	21.8	0.71	25.9	0.86	28.7	1.06	29.0	1.17	29.5	1.28	30.5	1.42	31.3	1.44
	75	21.8	0.73	25.9	0.92	28.3	1.13	28.6	1.25	29.0	1.37	30.1	1.49	30.9	1.50
	80	21.8	0.83	25.9	1.05	27.5	1.30	27.8	1.43	28.3	1.57	29.3	1.62	30.1	1.63
	85	21.8	0.88	25.9	1.12	27.0	1.39	27.5	1.53	27.8	1.67	28.9	1.68	29.7	1.70
	90	21.8	1.00	25.5	1.27	26.3	1.57	26.6	1.74	27.0	1.80	28.1	1.81	28.9	1.83
	95	22.1	1.06	25.3	1.35	26.1	1.68	**26.5**	**1.86**	26.9	1.86	27.9	1.88	28.7	1.90
	100	22.1	1.14	24.9	1.46	25.6	1.82	26.1	1.95	26.4	1.97	27.6	1.98	28.4	2.00
	105	22.1	1.29	24.2	1.65	25.0	2.05	25.4	2.10	25.7	2.11	26.6	2.13	27.0	2.15
	110	22.1	1.45	23.2	1.86	24.2	2.24	24.2	2.25	24.6	2.26	25.1	2.28	25.2	2.30
	115	21.9	1.67	22.3	2.14	22.3	2.36	22.3	2.36	22.3	2.36	22.7	2.37	22.8	2.37
	118	19.1	1.42	19.4	1.82	19.5	1.99	19.5	2.00	19.5	2.00	19.7	2.01	19.7	2.01
	122	15.2	1.08	15.6	1.38	15.5	1.51	15.5	1.52	15.6	1.52	15.8	1.52	15.8	1.53
120	-9.9	19.9	0.49	23.7	0.59	27.5	0.70	29.5	0.76	30.8	0.82	32.2	0.94	32.9	0.97
	-5	19.9	0.52	23.7	0.63	27.5	0.74	29.5	0.80	30.8	0.86	32.2	0.99	32.9	1.02
	0	19.9	0.54	23.7	0.65	27.5	0.77	29.5	0.83	30.8	0.90	32.2	1.03	32.9	1.06
	5	19.9	0.56	23.7	0.67	27.5	0.80	29.5	0.86	30.8	0.93	32.2	1.06	32.9	1.10
	10	19.9	0.57	23.7	0.69	27.5	0.82	29.5	0.89	30.8	0.95	32.2	1.09	32.9	1.13
	14	19.9	0.59	23.7	0.72	27.5	0.85	29.5	0.92	30.8	0.99	32.2	1.13	32.9	1.17
	20	19.9	0.60	23.7	0.73	27.5	0.86	29.5	0.93	30.8	1.00	32.2	1.15	32.9	1.19
	25	19.9	0.61	23.7	0.74	27.5	0.87	29.5	0.94	30.8	1.02	32.2	1.16	32.9	1.20
	30	19.9	0.62	23.7	0.75	27.5	0.88	29.5	0.96	30.8	1.03	32.2	1.18	32.9	1.22
	35	19.9	0.63	23.7	0.76	27.5	0.89	29.5	0.97	30.8	1.04	32.2	1.19	32.9	1.23
	40	19.9	0.63	23.7	0.77	27.5	0.91	29.5	0.98	30.8	1.05	32.2	1.21	32.9	1.25
	45	19.9	0.64	23.7	0.77	27.5	0.92	29.5	0.99	30.8	1.06	32.2	1.22	32.9	1.26
	50	19.9	0.65	23.7	0.78	27.5	0.93	29.5	1.00	30.8	1.08	32.2	1.23	32.9	1.28
	55	19.9	0.66	23.7	0.80	27.5	0.94	29.5	1.02	30.5	1.10	31.8	1.26	32.6	1.29
	60	19.9	0.68	23.7	0.83	27.5	0.98	29.3	1.06	29.6	1.14	31.0	1.29	31.7	1.32
	65	19.9	0.69	23.7	0.84	27.5	1.00	28.9	1.08	29.3	1.16	30.6	1.34	31.3	1.35
	70	19.9	0.68	23.7	0.83	27.5	1.02	28.3	1.12	28.6	1.23	30.0	1.36	30.7	1.38
	75	19.9	0.70	23.7	0.88	27.5	1.09	27.9	1.20	28.3	1.32	29.5	1.43	30.3	1.44
	80	19.9	0.79	23.7	1.00	26.8	1.25	27.1	1.37	27.4	1.51	28.8	1.55	29.4	1.57
	85	19.9	0.84	23.7	1.07	26.3	1.33	26.7	1.47	27.1	1.60	28.3	1.62	29.1	1.63
	90	19.9	0.96	23.7	1.22	25.6	1.51	25.9	1.67	26.2	1.73	27.5	1.74	28.2	1.76
	95	20.1	1.01	24.0	1.30	25.4	1.61	**25.7**	**1.78**	26.2	1.79	27.4	1.81	28.2	1.82
	100	20.1	1.10	24.0	1.40	24.9	1.75	25.4	1.88	25.7	1.89	27.0	1.90	27.7	1.92
	105	20.1	1.24	23.6	1.59	24.3	1.97	24.7	2.02	25.0	2.03	26.2	2.05	26.7	2.07
	110	20.1	1.39	23.0	1.79	23.7	2.15	23.8	2.16	24.1	2.17	24.9	2.19	25.0	2.21
	115	19.5	1.61	22.1	2.06	22.1	2.27	22.1	2.27	22.1	2.27	22.7	2.27	22.8	2.28
	118	17.4	1.42	19.2	1.74	19.3	1.91	19.3	1.92	19.3	1.92	19.7	1.93	19.7	1.93
	122	13.9	1.08	15.4	1.32	15.4	1.45	15.4	1.46	15.4	1.46	15.9	1.46	15.8	1.47

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUN024GSS0

MULTI V™ S WITH LGRED°

Table 18: ZRUN024GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
110	-9.9	18.4	0.45	22.0	0.54	25.5	0.64	27.3	0.70	29.1	0.75	32.0	0.85	32.7	0.88
	-5	18.4	0.47	22.0	0.57	25.5	0.68	27.3	0.74	29.1	0.79	32.0	0.90	32.7	0.93
	0	18.4	0.49	22.0	0.60	25.5	0.71	27.3	0.77	29.1	0.82	32.0	0.94	32.7	0.97
	5	18.4	0.51	22.0	0.62	25.5	0.73	27.3	0.79	29.1	0.85	32.0	0.97	32.7	1.01
	10	18.4	0.53	22.0	0.64	25.5	0.75	27.3	0.82	29.1	0.87	32.0	1.00	32.7	1.04
	14	18.4	0.55	22.0	0.66	25.5	0.78	27.3	0.85	29.1	0.91	32.0	1.03	32.7	1.07
	20	18.4	0.55	22.0	0.67	25.5	0.79	27.3	0.86	29.1	0.92	32.0	1.05	32.7	1.09
	25	18.4	0.56	22.0	0.68	25.5	0.80	27.3	0.87	29.1	0.93	32.0	1.07	32.7	1.10
	30	18.4	0.57	22.0	0.69	25.5	0.81	27.3	0.88	29.1	0.94	32.0	1.08	32.7	1.12
	35	18.4	0.58	22.0	0.70	25.5	0.82	27.3	0.89	29.1	0.96	32.0	1.10	32.7	1.14
	40	18.4	0.58	22.0	0.71	25.5	0.83	27.3	0.90	29.1	0.97	32.0	1.11	32.7	1.15
	45	18.4	0.59	22.0	0.72	25.5	0.85	27.3	0.92	29.1	0.99	32.0	1.13	32.7	1.17
	50	18.4	0.60	22.0	0.73	25.5	0.86	27.3	0.93	29.1	1.00	32.0	1.15	32.7	1.19
	55	18.4	0.61	22.0	0.74	25.5	0.88	27.3	0.95	29.1	1.02	31.6	1.17	32.2	1.20
	60	18.4	0.63	22.0	0.77	25.5	0.92	27.3	0.99	29.1	1.06	30.8	1.21	31.4	1.22
	65	18.4	0.65	22.0	0.79	25.5	0.93	27.3	1.01	29.1	1.08	30.3	1.25	31.0	1.26
	70	18.4	0.65	22.0	0.79	25.5	0.98	27.3	1.07	28.5	1.18	29.7	1.31	30.4	1.32
	75	18.4	0.67	22.0	0.85	25.5	1.04	27.3	1.15	28.1	1.26	29.3	1.37	30.0	1.38
	80	18.2	0.76	21.7	0.96	25.2	1.19	26.7	1.32	27.0	1.45	28.2	1.49	28.9	1.50
	85	18.2	0.81	21.7	1.03	25.2	1.28	26.2	1.41	26.6	1.54	27.8	1.55	28.4	1.56
	90	18.2	0.92	21.7	1.17	25.1	1.45	25.5	1.60	25.8	1.66	27.0	1.67	27.7	1.69
	95	18.2	0.97	21.7	1.24	24.7	1.55	**25.0**	**1.71**	25.4	1.72	26.5	1.73	27.2	1.75
	100	18.2	1.05	21.7	1.34	24.4	1.68	24.7	1.80	25.0	1.81	26.2	1.83	26.9	1.84
	105	18.2	1.19	21.7	1.52	23.6	1.89	23.9	1.94	24.3	1.95	25.4	1.96	26.1	1.98
	110	18.2	1.33	21.7	1.71	22.9	2.06	22.9	2.07	23.3	2.08	24.0	2.10	24.1	2.12
	115	18.2	1.54	21.7	1.97	21.9	2.17	21.9	2.17	22.0	2.17	22.4	2.18	22.5	2.18
	118	17.6	1.40	18.9	1.67	19.1	1.83	19.1	1.85	19.2	1.85	19.5	1.85	19.5	1.85
	122	14.1	1.07	15.2	1.27	15.2	1.39	15.2	1.40	15.3	1.40	15.7	1.40	15.7	1.41
100	-9.9	16.2	0.40	19.3	0.48	22.4	0.57	24.0	0.62	26.4	0.67	29.6	0.77	31.2	0.80
	-5	16.2	0.42	19.3	0.50	22.4	0.60	24.0	0.65	26.4	0.70	29.6	0.81	31.2	0.85
	0	16.2	0.43	19.3	0.52	22.4	0.62	24.0	0.68	26.4	0.73	29.6	0.85	31.2	0.88
	5	16.2	0.45	19.3	0.54	22.4	0.64	24.0	0.70	26.4	0.76	29.6	0.88	31.2	0.91
	10	16.2	0.46	19.3	0.56	22.4	0.66	24.0	0.72	26.4	0.78	29.6	0.90	31.2	0.94
	14	16.2	0.48	19.3	0.58	22.4	0.69	24.0	0.75	26.4	0.81	29.6	0.93	31.2	0.97
	20	16.2	0.50	19.3	0.60	22.4	0.71	24.0	0.77	26.4	0.84	29.6	0.96	31.2	1.00
	25	16.2	0.51	19.3	0.61	22.4	0.73	24.0	0.79	26.4	0.86	29.6	0.98	31.2	1.02
	30	16.2	0.52	19.3	0.63	22.4	0.74	24.0	0.81	26.4	0.88	29.6	1.01	31.2	1.05
	35	16.2	0.53	19.3	0.64	22.4	0.76	24.0	0.82	26.4	0.89	29.6	1.02	31.2	1.06
	40	16.2	0.54	19.3	0.65	22.4	0.77	24.0	0.83	26.4	0.91	29.6	1.04	31.2	1.08
	45	16.2	0.55	19.3	0.66	22.4	0.78	24.0	0.85	26.4	0.93	29.6	1.06	31.2	1.10
	50	16.2	0.56	19.3	0.68	22.4	0.80	24.0	0.87	26.4	0.94	29.6	1.08	31.2	1.13
	55	16.2	0.57	19.3	0.69	22.4	0.82	24.0	0.88	26.4	0.96	29.6	1.10	30.9	1.14
	60	16.2	0.59	19.3	0.71	22.4	0.85	24.0	0.92	26.4	1.00	29.5	1.14	30.0	1.16
	65	16.2	0.60	19.3	0.73	22.4	0.87	24.0	0.94	26.4	1.02	29.0	1.17	29.7	1.20
	70	16.2	0.62	19.3	0.75	22.4	0.92	24.0	1.02	26.4	1.13	28.5	1.26	29.0	1.28
	75	16.2	0.63	19.3	0.80	22.4	0.99	24.0	1.09	26.4	1.21	28.0	1.32	28.7	1.33
	80	16.2	0.72	19.3	0.91	22.4	1.13	24.0	1.25	26.4	1.39	27.3	1.43	27.8	1.45
	85	16.2	0.77	19.3	0.97	22.4	1.21	24.0	1.33	26.3	1.48	26.8	1.49	27.5	1.51
	90	16.2	0.87	19.3	1.11	22.4	1.37	24.0	1.52	25.4	1.59	26.0	1.61	26.6	1.63
	95	16.2	0.92	19.3	1.18	22.4	1.47	**24.0**	**1.62**	25.1	1.65	25.6	1.67	26.3	1.69
	100	16.2	0.99	19.3	1.27	22.4	1.58	23.6	1.70	24.6	1.74	25.3	1.75	25.8	1.78
	105	16.2	1.12	19.3	1.43	22.3	1.78	22.9	1.82	23.9	1.86	24.5	1.88	25.1	1.90
	110	16.2	1.25	19.3	1.61	22.0	1.93	22.5	1.94	23.0	1.98	23.3	2.00	23.8	2.03
	115	16.2	1.44	19.3	1.84	21.0	2.03	21.6	2.03	22.1	2.06	22.3	2.06	22.4	2.07
	118	16.2	1.45	16.9	1.72	18.2	1.70	18.8	1.72	19.3	1.74	19.5	1.75	19.4	1.76
	122	13.8	1.31	13.6	1.31	14.5	1.30	15.0	1.30	15.4	1.32	15.6	1.32	15.6	1.34

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUN024GSS0

Table 19: ZRUN024GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
90	-9.9	14.6	0.35	17.4	0.42	20.3	0.50	21.6	0.54	23.0	0.57	25.8	0.66	28.6	0.73
	-5	14.6	0.37	17.4	0.45	20.3	0.53	21.6	0.57	23.0	0.61	25.8	0.70	28.6	0.77
	0	14.6	0.39	17.4	0.46	20.3	0.55	21.6	0.59	23.0	0.63	25.8	0.73	28.6	0.80
	5	14.6	0.40	17.4	0.48	20.3	0.57	21.6	0.61	23.0	0.65	25.8	0.75	28.6	0.83
	10	14.6	0.41	17.4	0.50	20.3	0.59	21.6	0.63	23.0	0.67	25.8	0.77	28.6	0.85
	14	14.6	0.43	17.4	0.51	20.3	0.61	21.6	0.65	23.0	0.70	25.8	0.80	28.6	0.88
	20	14.6	0.44	17.4	0.53	20.3	0.63	21.6	0.68	23.0	0.73	25.8	0.83	28.6	0.91
	25	14.6	0.46	17.4	0.55	20.3	0.65	21.6	0.70	23.0	0.75	25.8	0.86	28.6	0.94
	30	14.6	0.47	17.4	0.57	20.3	0.67	21.6	0.72	23.0	0.77	25.8	0.88	28.6	0.97
	35	14.6	0.48	17.4	0.58	20.3	0.69	21.6	0.74	23.0	0.80	25.8	0.91	28.6	1.00
	40	14.6	0.50	17.4	0.60	20.3	0.71	21.6	0.76	23.0	0.82	25.8	0.93	28.6	1.03
	45	14.6	0.51	17.4	0.61	20.3	0.72	21.6	0.78	23.0	0.84	25.8	0.95	28.6	1.05
	50	14.6	0.52	17.4	0.63	20.3	0.74	21.6	0.80	23.0	0.86	25.8	0.98	28.6	1.08
	55	14.6	0.53	17.4	0.64	20.3	0.75	21.6	0.81	23.0	0.88	25.8	1.00	28.6	1.09
	60	14.6	0.55	17.4	0.66	20.3	0.78	21.6	0.85	23.0	0.91	25.8	1.03	28.4	1.10
	65	14.6	0.56	17.4	0.68	20.3	0.80	21.6	0.86	23.0	0.93	25.8	1.05	28.2	1.16
	70	14.6	0.57	17.4	0.70	20.3	0.83	21.6	0.91	23.0	0.99	25.8	1.17	27.6	1.24
	75	14.6	0.58	17.4	0.73	20.3	0.89	21.6	0.98	23.0	1.07	25.8	1.23	27.2	1.30
	80	14.6	0.65	17.4	0.82	20.3	1.01	21.6	1.11	23.0	1.22	25.8	1.35	26.5	1.41
	85	14.6	0.70	17.4	0.88	20.3	1.08	21.6	1.19	23.0	1.30	25.5	1.43	26.0	1.47
	90	14.6	0.79	17.4	0.99	20.3	1.23	21.6	1.35	23.0	1.48	24.8	1.56	25.3	1.58
	95	14.6	0.84	17.4	1.06	20.3	1.31	**21.6**	**1.44**	23.0	1.58	24.3	1.62	24.9	1.64
	100	14.6	0.86	17.4	1.10	20.3	1.36	21.6	1.50	23.0	1.62	24.0	1.69	24.4	1.71
	105	14.6	1.00	17.4	1.28	20.3	1.54	21.6	1.64	22.8	1.74	23.3	1.81	23.6	1.83
	110	14.6	1.15	17.4	1.47	20.3	1.69	21.6	1.77	21.9	1.88	22.1	1.95	22.3	1.97
	115	14.6	1.25	17.4	1.60	19.0	1.78	20.5	1.85	20.8	1.94	21.0	1.98	21.1	2.01
	118	14.6	1.32	16.9	1.72	16.5	1.50	17.9	1.57	18.1	1.65	18.3	1.68	18.2	1.70
	122	13.8	1.31	13.6	1.31	13.2	1.14	14.3	1.19	14.5	1.25	14.7	1.28	14.7	1.30
80	-9.9	13.0	0.31	15.4	0.37	18.0	0.43	19.2	0.46	20.5	0.50	22.9	0.57	25.4	0.64
	-5	13.0	0.32	15.4	0.39	18.0	0.45	19.2	0.49	20.5	0.53	22.9	0.60	25.4	0.67
	0	13.0	0.34	15.4	0.40	18.0	0.47	19.2	0.51	20.5	0.55	22.9	0.63	25.4	0.70
	5	13.0	0.35	15.4	0.42	18.0	0.49	19.2	0.53	20.5	0.57	22.9	0.65	25.4	0.73
	10	13.0	0.36	15.4	0.43	18.0	0.50	19.2	0.54	20.5	0.59	22.9	0.67	25.4	0.75
	14	13.0	0.37	15.4	0.45	18.0	0.52	19.2	0.56	20.5	0.61	22.9	0.69	25.4	0.77
	20	13.0	0.39	15.4	0.46	18.0	0.54	19.2	0.59	20.5	0.63	22.9	0.72	25.4	0.80
	25	13.0	0.40	15.4	0.48	18.0	0.56	19.2	0.60	20.5	0.65	22.9	0.74	25.4	0.83
	30	13.0	0.41	15.4	0.49	18.0	0.57	19.2	0.62	20.5	0.66	22.9	0.76	25.4	0.85
	35	13.0	0.42	15.4	0.50	18.0	0.59	19.2	0.64	20.5	0.68	22.9	0.78	25.4	0.88
	40	13.0	0.43	15.4	0.52	18.0	0.61	19.2	0.65	20.5	0.70	22.9	0.80	25.4	0.90
	45	13.0	0.44	15.4	0.52	18.0	0.62	19.2	0.66	20.5	0.71	22.9	0.81	25.4	0.91
	50	13.0	0.44	15.4	0.53	18.0	0.62	19.2	0.67	20.5	0.72	22.9	0.83	25.4	0.92
	55	13.0	0.45	15.4	0.54	18.0	0.63	19.2	0.68	20.5	0.73	22.9	0.84	25.4	0.94
	60	13.0	0.47	15.4	0.56	18.0	0.66	19.2	0.71	20.5	0.76	22.9	0.87	25.4	0.98
	65	13.0	0.47	15.4	0.57	18.0	0.67	19.2	0.72	20.5	0.78	22.9	0.89	25.4	1.00
	70	13.0	0.49	15.4	0.59	18.0	0.69	19.2	0.74	20.5	0.81	22.9	0.96	25.4	1.11
	75	13.0	0.50	15.4	0.60	18.0	0.72	19.2	0.79	20.5	0.86	22.9	1.02	25.4	1.17
	80	13.0	0.54	15.4	0.68	18.0	0.83	19.2	0.90	20.5	0.99	22.9	1.17	25.4	1.30
	85	13.0	0.58	15.4	0.72	18.0	0.88	19.2	0.96	20.5	1.06	22.9	1.25	25.4	1.34
	90	13.0	0.65	15.4	0.82	18.0	0.99	19.2	1.09	20.5	1.20	22.9	1.37	25.0	1.42
	95	13.0	0.69	15.4	0.86	18.0	1.06	**19.2**	**1.16**	20.5	1.28	22.9	1.42	24.4	1.46
	100	13.0	0.74	15.4	0.93	18.0	1.15	19.2	1.24	20.5	1.33	22.9	1.48	23.9	1.50
	105	13.0	0.85	15.4	1.07	18.0	1.27	19.2	1.33	20.5	1.42	22.7	1.53	23.2	1.58
	110	13.0	0.96	15.4	1.22	18.0	1.35	19.2	1.43	20.5	1.53	21.9	1.59	22.0	1.66
	115	13.0	1.03	15.4	1.30	18.0	1.40	19.2	1.50	19.2	1.57	19.3	1.63	19.3	1.73
	118	13.0	1.09	15.4	1.38	16.5	1.50	16.8	1.42	16.7	1.33	16.8	1.38	16.7	1.46
	122	13.0	1.18	13.6	1.30	13.2	1.14	13.5	1.08	13.4	1.01	13.5	1.05	13.4	1.11

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUN024GSS0

MULTI V™ S WITH LGRED°

Table 20: ZRUN024GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-9.9	11.4	0.27	13.5	0.32	15.8	0.38	16.8	0.40	17.9	0.43	20.0	0.49	22.3	0.55
	-5	11.4	0.28	13.5	0.34	15.8	0.40	16.8	0.43	17.9	0.45	20.0	0.52	22.3	0.58
	0	11.4	0.30	13.5	0.35	15.8	0.41	16.8	0.44	17.9	0.47	20.0	0.54	22.3	0.61
	5	11.4	0.31	13.5	0.37	15.8	0.43	16.8	0.46	17.9	0.49	20.0	0.56	22.3	0.63
	10	11.4	0.32	13.5	0.38	15.8	0.44	16.8	0.47	17.9	0.50	20.0	0.58	22.3	0.65
	14	11.4	0.33	13.5	0.39	15.8	0.46	16.8	0.49	17.9	0.52	20.0	0.60	22.3	0.67
	20	11.4	0.34	13.5	0.40	15.8	0.47	16.8	0.51	17.9	0.54	20.0	0.62	22.3	0.69
	25	11.4	0.35	13.5	0.41	15.8	0.48	16.8	0.52	17.9	0.56	20.0	0.63	22.3	0.71
	30	11.4	0.36	13.5	0.42	15.8	0.50	16.8	0.53	17.9	0.57	20.0	0.65	22.3	0.73
	35	11.4	0.37	13.5	0.44	15.8	0.51	16.8	0.55	17.9	0.59	20.0	0.67	22.3	0.75
	40	11.4	0.38	13.5	0.45	15.8	0.52	16.8	0.56	17.9	0.60	20.0	0.68	22.3	0.77
	45	11.4	0.38	13.5	0.45	15.8	0.53	16.8	0.57	17.9	0.61	20.0	0.69	22.3	0.78
	50	11.4	0.39	13.5	0.46	15.8	0.54	16.8	0.58	17.9	0.62	20.0	0.71	22.3	0.79
	55	11.4	0.40	13.5	0.47	15.8	0.55	16.8	0.59	17.9	0.63	20.0	0.72	22.3	0.81
	60	11.4	0.41	13.5	0.49	15.8	0.57	16.8	0.61	17.9	0.65	20.0	0.75	22.3	0.84
	65	11.4	0.41	13.5	0.50	15.8	0.58	16.8	0.62	17.9	0.67	20.0	0.76	22.3	0.86
	70	11.4	0.43	13.5	0.51	15.8	0.60	16.8	0.64	17.9	0.69	20.0	0.79	22.3	0.91
	75	11.4	0.43	13.5	0.52	15.8	0.61	16.8	0.66	17.9	0.72	20.0	0.84	22.3	0.96
	80	11.4	0.47	13.5	0.57	15.8	0.69	16.8	0.75	17.9	0.82	20.0	0.93	22.3	1.07
	85	11.4	0.50	13.5	0.61	15.8	0.74	16.8	0.80	17.9	0.88	20.0	0.99	22.3	1.11
	90	11.4	0.56	13.5	0.69	15.8	0.83	16.8	0.91	17.9	0.99	20.0	1.11	22.3	1.21
	95	11.4	0.59	13.5	0.73	15.8	0.89	**16.8**	**0.97**	17.9	1.06	20.0	1.16	22.3	1.24
	100	11.4	0.63	13.5	0.79	15.8	0.96	16.8	1.05	17.9	1.09	20.0	1.22	22.3	1.28
	105	11.4	0.72	13.5	0.90	15.8	1.05	16.8	1.12	17.9	1.18	20.0	1.28	22.3	1.35
	110	11.4	0.81	13.5	1.02	15.8	1.12	16.8	1.18	17.9	1.28	20.0	1.33	21.6	1.46
	115	11.4	0.87	13.5	1.08	15.8	1.15	16.8	1.25	17.9	1.32	20.0	1.38	20.4	1.55
	118	11.4	0.92	13.5	1.15	15.8	1.23	16.8	1.33	16.3	1.32	16.8	1.17	16.7	1.32
	122	11.4	1.00	13.5	1.25	14.1	1.17	13.4	1.09	13.0	1.00	13.5	0.88	13.4	1.00
60	-9.9	9.8	0.23	11.6	0.27	13.5	0.32	14.4	0.34	15.3	0.37	17.3	0.42	19.1	0.46
	-5	9.8	0.25	11.6	0.29	13.5	0.34	14.4	0.36	15.3	0.39	17.3	0.44	19.1	0.49
	0	9.8	0.26	11.6	0.30	13.5	0.35	14.4	0.37	15.3	0.40	17.3	0.46	19.1	0.51
	5	9.8	0.27	11.6	0.31	13.5	0.36	14.4	0.39	15.3	0.42	17.3	0.47	19.1	0.53
	10	9.8	0.27	11.6	0.32	13.5	0.37	14.4	0.40	15.3	0.43	17.3	0.49	19.1	0.54
	14	9.8	0.28	11.6	0.33	13.5	0.39	14.4	0.41	15.3	0.45	17.3	0.50	19.1	0.56
	20	9.8	0.29	11.6	0.34	13.5	0.40	14.4	0.43	15.3	0.46	17.3	0.52	19.1	0.58
	25	9.8	0.30	11.6	0.35	13.5	0.41	14.4	0.44	15.3	0.47	17.3	0.53	19.1	0.60
	30	9.8	0.31	11.6	0.36	13.5	0.42	14.4	0.45	15.3	0.48	17.3	0.55	19.1	0.62
	35	9.8	0.31	11.6	0.37	13.5	0.43	14.4	0.46	15.3	0.50	17.3	0.56	19.1	0.63
	40	9.8	0.32	11.6	0.38	13.5	0.44	14.4	0.48	15.3	0.51	17.3	0.58	19.1	0.65
	45	9.8	0.33	11.6	0.38	13.5	0.45	14.4	0.48	15.3	0.51	17.3	0.58	19.1	0.65
	50	9.8	0.33	11.6	0.39	13.5	0.45	14.4	0.48	15.3	0.52	17.3	0.59	19.1	0.66
	55	9.8	0.33	11.6	0.39	13.5	0.46	14.4	0.49	15.3	0.53	17.3	0.60	19.1	0.67
	60	9.8	0.34	11.6	0.41	13.5	0.47	14.4	0.51	15.3	0.55	17.3	0.62	19.1	0.70
	65	9.8	0.35	11.6	0.41	13.5	0.48	14.4	0.52	15.3	0.56	17.3	0.63	19.1	0.71
	70	9.8	0.36	11.6	0.43	13.5	0.50	14.4	0.53	15.3	0.57	17.3	0.65	19.1	0.74
	75	9.8	0.36	11.6	0.43	13.5	0.51	14.4	0.54	15.3	0.59	17.3	0.69	19.1	0.79
	80	9.8	0.39	11.6	0.47	13.5	0.57	14.4	0.62	15.3	0.67	17.3	0.77	19.1	0.89
	85	9.8	0.41	11.6	0.50	13.5	0.60	14.4	0.66	15.3	0.72	17.3	0.81	19.1	0.92
	90	9.8	0.46	11.6	0.57	13.5	0.68	14.4	0.74	15.3	0.81	17.3	0.91	19.1	1.00
	95	9.8	0.49	11.6	0.60	13.5	0.72	**14.4**	**0.79**	15.3	0.85	17.3	0.95	19.1	1.05
	100	9.8	0.52	11.6	0.65	13.5	0.78	14.4	0.86	15.3	0.89	17.3	1.01	19.1	1.10
	105	9.8	0.60	11.6	0.74	13.5	0.86	14.4	0.91	15.3	0.97	17.3	1.07	19.1	1.20
	110	9.8	0.67	11.6	0.83	13.5	0.93	14.4	0.97	15.3	1.05	17.3	1.14	19.1	1.31
	115	9.8	0.72	11.6	0.89	13.5	0.97	14.4	1.02	15.3	1.09	17.3	1.21	19.1	1.40
	118	9.8	0.76	11.6	0.94	13.5	1.03	14.4	1.09	15.3	1.16	16.8	1.17	16.7	1.32
	122	9.8	0.82	11.6	1.02	13.5	1.11	13.4	1.10	13.0	1.02	13.5	0.88	13.4	1.00

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

COOLING CAPACITY

ZRUN024GSS0

Table 21: ZRUN024GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
50	-9.9	8.1	0.20	9.6	0.24	11.3	0.27	12.0	0.29	12.8	0.31	14.4	0.34	15.9	0.38
	-5	8.1	0.21	9.6	0.25	11.3	0.28	12.0	0.30	12.8	0.32	14.4	0.36	15.9	0.40
	0	8.1	0.22	9.6	0.26	11.3	0.29	12.0	0.31	12.8	0.34	14.4	0.37	15.9	0.42
	5	8.1	0.23	9.6	0.27	11.3	0.30	12.0	0.32	12.8	0.35	14.4	0.39	15.9	0.43
	10	8.1	0.24	9.6	0.28	11.3	0.31	12.0	0.33	12.8	0.36	14.4	0.40	15.9	0.44
	14	8.1	0.24	9.6	0.29	11.3	0.32	12.0	0.35	12.8	0.37	14.4	0.41	15.9	0.46
	20	8.1	0.25	9.6	0.30	11.3	0.33	12.0	0.36	12.8	0.39	14.4	0.43	15.9	0.48
	25	8.1	0.26	9.6	0.30	11.3	0.35	12.0	0.37	12.8	0.40	14.4	0.44	15.9	0.49
	30	8.1	0.27	9.6	0.31	11.3	0.36	12.0	0.38	12.8	0.41	14.4	0.45	15.9	0.51
	35	8.1	0.28	9.6	0.32	11.3	0.37	12.0	0.39	12.8	0.42	14.4	0.47	15.9	0.52
	40	8.1	0.28	9.6	0.33	11.3	0.38	12.0	0.40	12.8	0.43	14.4	0.48	15.9	0.53
	45	8.1	0.29	9.6	0.33	11.3	0.38	12.0	0.41	12.8	0.43	14.4	0.48	15.9	0.54
	50	8.1	0.29	9.6	0.34	11.3	0.39	12.0	0.41	12.8	0.44	14.4	0.49	15.9	0.55
	55	8.1	0.30	9.6	0.34	11.3	0.39	12.0	0.42	12.8	0.45	14.4	0.50	15.9	0.56
	60	8.1	0.30	9.6	0.35	11.3	0.41	12.0	0.43	12.8	0.46	14.4	0.52	15.9	0.58
	65	8.1	0.31	9.6	0.36	11.3	0.41	12.0	0.44	12.8	0.47	14.4	0.53	15.9	0.59
	70	8.1	0.32	9.6	0.36	11.3	0.42	12.0	0.45	12.8	0.48	14.4	0.54	15.9	0.61
	75	8.1	0.32	9.6	0.37	11.3	0.43	12.0	0.46	12.8	0.49	14.4	0.55	15.9	0.62
	80	8.1	0.33	9.6	0.39	11.3	0.46	12.0	0.50	12.8	0.53	14.4	0.62	15.9	0.70
	85	8.1	0.35	9.6	0.41	11.3	0.49	12.0	0.53	12.8	0.57	14.4	0.66	15.9	0.75
	90	8.1	0.39	9.6	0.46	11.3	0.55	12.0	0.59	12.8	0.64	14.4	0.74	15.9	0.85
	95	8.1	0.41	9.6	0.49	11.3	0.58	**12.0**	**0.63**	12.8	0.68	14.4	0.79	15.9	0.90
	100	8.1	0.43	9.6	0.52	11.3	0.62	12.0	0.67	12.8	0.72	14.4	0.83	15.9	0.96
	105	8.1	0.47	9.6	0.57	11.3	0.68	12.0	0.74	12.8	0.80	14.4	0.93	15.9	1.06
	110	8.1	0.52	9.6	0.63	11.3	0.75	12.0	0.82	12.8	0.89	14.4	1.03	15.9	1.19
	115	8.1	0.56	9.6	0.68	11.3	0.81	12.0	0.88	12.8	0.96	14.4	1.11	15.9	1.28
	118	8.1	0.60	9.6	0.74	11.3	0.88	12.0	0.96	12.8	1.04	14.4	1.17	15.9	1.32
	122	8.1	0.67	9.6	0.82	11.3	0.97	12.0	1.06	12.8	1.02	13.5	0.88	13.4	1.00

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM036GSS0

MULTI V™ S WITH LGRED°

Table 22: ZRUM036GSS0 Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-9.9	32.7	0.74	38.9	0.90	45.2	1.07	46.9	1.15	47.5	1.25	49.2	1.43	50.4	1.48
	-5	32.7	0.78	38.9	0.95	45.2	1.13	46.9	1.22	47.5	1.31	49.2	1.51	50.4	1.56
	0	32.7	0.82	38.9	0.99	45.2	1.17	46.9	1.27	47.5	1.37	49.2	1.57	50.4	1.62
	5	32.7	0.85	38.9	1.03	45.2	1.22	46.9	1.31	47.5	1.42	49.2	1.62	50.4	1.68
	10	32.7	0.87	38.9	1.06	45.2	1.25	46.9	1.35	47.5	1.46	49.2	1.67	50.4	1.73
	14	32.7	0.90	38.9	1.09	45.2	1.30	46.9	1.40	47.5	1.51	49.2	1.73	50.4	1.79
	20	32.7	0.92	38.9	1.11	45.2	1.32	46.9	1.42	47.5	1.53	49.2	1.76	50.4	1.82
	25	32.7	0.93	38.9	1.13	45.2	1.33	46.9	1.44	47.5	1.55	49.2	1.78	50.4	1.84
	30	32.7	0.94	38.9	1.14	45.2	1.35	46.9	1.46	47.5	1.57	49.2	1.80	50.4	1.86
	35	32.7	0.95	38.9	1.15	45.2	1.36	46.9	1.47	47.5	1.59	49.2	1.82	50.4	1.88
	40	32.7	0.96	38.9	1.17	45.2	1.38	46.9	1.49	47.5	1.60	49.2	1.84	50.4	1.90
	45	32.7	0.97	38.9	1.18	45.2	1.40	46.9	1.51	47.5	1.62	49.2	1.86	50.4	1.92
	50	32.7	0.98	38.9	1.19	45.2	1.41	46.9	1.52	47.5	1.64	49.2	1.88	50.4	1.94
	55	32.7	1.00	38.9	1.21	45.2	1.44	46.2	1.56	46.9	1.67	48.5	1.91	49.7	1.96
	60	32.7	1.03	38.9	1.26	44.5	1.50	45.2	1.62	45.7	1.74	47.3	1.97	48.5	1.98
	65	32.7	1.06	38.9	1.28	43.9	1.52	44.5	1.65	45.0	1.77	46.7	2.03	47.8	2.05
	70	32.7	1.02	38.9	1.23	43.0	1.52	43.5	1.67	44.2	1.83	45.8	2.04	47.0	2.06
	75	32.7	1.04	38.9	1.31	42.4	1.62	42.9	1.79	43.5	1.96	45.1	2.13	46.3	2.15
	80	32.7	1.18	38.9	1.50	41.2	1.86	41.7	2.05	42.4	2.25	44.0	2.31	45.1	2.34
	85	32.7	1.26	38.9	1.60	40.5	1.98	41.2	2.19	41.7	2.39	43.3	2.41	44.5	2.43
	90	32.7	1.43	38.2	1.82	39.4	2.25	39.9	2.49	40.5	2.58	42.1	2.60	43.3	2.62
	95	33.1	1.51	38.0	1.93	39.1	2.41	**39.8**	**2.66**	40.3	2.67	41.9	2.70	43.1	2.72
	100	33.1	1.64	37.3	2.09	38.5	2.61	39.1	2.80	39.6	2.82	41.4	2.84	42.6	2.87
	105	33.1	1.85	36.3	2.37	37.4	2.94	38.0	3.01	38.6	3.03	39.9	3.05	40.5	3.08
	110	33.1	2.07	34.8	2.67	36.2	3.21	36.3	3.23	36.9	3.24	37.7	3.27	37.8	3.30
	115	32.9	2.40	33.5	3.07	33.5	3.38	33.5	3.38	33.5	3.38	34.0	3.39	34.2	3.40
	118	28.6	2.03	29.1	2.60	29.2	2.84	29.2	2.87	29.2	2.87	29.6	2.88	29.5	2.88
	122	22.9	1.54	23.4	1.98	23.3	2.17	23.3	2.17	23.4	2.17	23.8	2.18	23.7	2.19
120	-9.9	29.8	0.70	35.6	0.85	41.3	1.00	44.3	1.08	46.2	1.17	48.3	1.34	49.4	1.38
	-5	29.8	0.74	35.6	0.90	41.3	1.06	44.3	1.14	46.2	1.23	48.3	1.41	49.4	1.46
	0	29.8	0.77	35.6	0.93	41.3	1.10	44.3	1.19	46.2	1.28	48.3	1.47	49.4	1.52
	5	29.8	0.80	35.6	0.97	41.3	1.14	44.3	1.23	46.2	1.33	48.3	1.52	49.4	1.58
	10	29.8	0.82	35.6	0.99	41.3	1.18	44.3	1.27	46.2	1.37	48.3	1.57	49.4	1.62
	14	29.8	0.85	35.6	1.03	41.3	1.22	44.3	1.31	46.2	1.42	48.3	1.62	49.4	1.68
	20	29.8	0.86	35.6	1.04	41.3	1.24	44.3	1.33	46.2	1.44	48.3	1.65	49.4	1.70
	25	29.8	0.87	35.6	1.06	41.3	1.25	44.3	1.35	46.2	1.45	48.3	1.67	49.4	1.72
	30	29.8	0.88	35.6	1.07	41.3	1.27	44.3	1.37	46.2	1.47	48.3	1.69	49.4	1.74
	35	29.8	0.90	35.6	1.08	41.3	1.28	44.3	1.39	46.2	1.49	48.3	1.71	49.4	1.77
	40	29.8	0.91	35.6	1.10	41.3	1.30	44.3	1.40	46.2	1.51	48.3	1.73	49.4	1.79
	45	29.8	0.92	35.6	1.11	41.3	1.31	44.3	1.42	46.2	1.52	48.3	1.75	49.4	1.81
	50	29.8	0.93	35.6	1.12	41.3	1.33	44.3	1.43	46.2	1.54	48.3	1.77	49.4	1.83
	55	29.8	0.94	35.6	1.14	41.3	1.35	44.3	1.46	45.8	1.57	47.7	1.80	48.9	1.84
	60	29.8	0.97	35.6	1.18	41.3	1.41	43.9	1.52	44.4	1.63	46.5	1.85	47.5	1.89
	65	29.8	0.99	35.6	1.21	41.3	1.43	43.3	1.55	43.9	1.66	45.8	1.92	47.0	1.93
	70	29.8	0.97	35.6	1.18	41.3	1.46	42.5	1.60	43.0	1.76	45.0	1.95	46.0	1.97
	75	29.8	1.00	35.6	1.26	41.3	1.56	41.8	1.72	42.5	1.89	44.3	2.05	45.5	2.06
	80	29.8	1.14	35.6	1.44	40.2	1.78	40.7	1.97	41.1	2.16	43.1	2.22	44.2	2.24
	85	29.8	1.21	35.6	1.54	39.5	1.91	40.0	2.10	40.7	2.30	42.5	2.31	43.6	2.33
	90	29.8	1.37	35.6	1.74	38.3	2.16	38.8	2.39	39.3	2.48	41.3	2.50	42.3	2.52
	95	30.1	1.45	35.9	1.86	38.1	2.31	**38.6**	**2.55**	39.3	2.56	41.1	2.59	42.2	2.61
	100	30.1	1.57	35.9	2.01	37.4	2.50	38.1	2.69	38.6	2.70	40.5	2.73	41.6	2.75
	105	30.1	1.77	35.4	2.27	36.4	2.83	37.0	2.89	37.5	2.91	39.4	2.93	40.0	2.96
	110	30.1	1.99	34.5	2.56	35.6	3.08	35.7	3.10	36.2	3.11	37.3	3.14	37.5	3.17
	115	29.3	2.30	33.2	2.95	33.2	3.25	33.2	3.25	33.2	3.25	34.0	3.25	34.2	3.26
	118	26.1	2.03	28.9	2.50	28.9	2.73	28.9	2.76	28.9	2.76	29.6	2.76	29.5	2.77
	122	20.9	1.54	23.1	1.90	23.0	2.08	23.1	2.08	23.1	2.09	23.8	2.09	23.7	2.10

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM036GSS0

Table 23: ZRUM036GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
110	-9.9	27.6	0.64	32.9	0.78	38.3	0.92	40.9	1.00	43.6	1.07	48.0	1.22	49.0	1.27
	-5	27.6	0.68	32.9	0.82	38.3	0.97	40.9	1.05	43.6	1.13	48.0	1.29	49.0	1.34
	0	27.6	0.71	32.9	0.85	38.3	1.01	40.9	1.10	43.6	1.17	48.0	1.34	49.0	1.39
	5	27.6	0.73	32.9	0.88	38.3	1.05	40.9	1.14	43.6	1.22	48.0	1.39	49.0	1.44
	10	27.6	0.75	32.9	0.91	38.3	1.08	40.9	1.17	43.6	1.25	48.0	1.43	49.0	1.48
	14	27.6	0.78	32.9	0.94	38.3	1.12	40.9	1.21	43.6	1.30	48.0	1.48	49.0	1.54
	20	27.6	0.79	32.9	0.96	38.3	1.13	40.9	1.23	43.6	1.32	48.0	1.51	49.0	1.56
	25	27.6	0.80	32.9	0.97	38.3	1.15	40.9	1.24	43.6	1.33	48.0	1.53	49.0	1.58
	30	27.6	0.81	32.9	0.98	38.3	1.16	40.9	1.26	43.6	1.35	48.0	1.55	49.0	1.60
	35	27.6	0.82	32.9	1.00	38.3	1.18	40.9	1.27	43.6	1.37	48.0	1.57	49.0	1.63
	40	27.6	0.84	32.9	1.01	38.3	1.20	40.9	1.29	43.6	1.39	48.0	1.59	49.0	1.65
	45	27.6	0.85	32.9	1.03	38.3	1.22	40.9	1.31	43.6	1.41	48.0	1.62	49.0	1.67
	50	27.6	0.86	32.9	1.04	38.3	1.24	40.9	1.34	43.6	1.44	48.0	1.65	49.0	1.70
	55	27.6	0.88	32.9	1.06	38.3	1.26	40.9	1.36	43.6	1.46	47.3	1.67	48.3	1.72
	60	27.6	0.91	32.9	1.10	38.3	1.31	40.9	1.42	43.6	1.52	46.1	1.73	47.2	1.74
	65	27.6	0.93	32.9	1.13	38.3	1.34	40.9	1.45	43.6	1.55	45.5	1.78	46.5	1.80
	70	27.6	0.93	32.9	1.14	38.3	1.40	40.9	1.54	42.7	1.69	44.6	1.87	45.6	1.89
	75	27.6	0.96	32.9	1.21	38.3	1.50	40.9	1.65	42.1	1.81	43.9	1.96	45.0	1.98
	80	27.3	1.09	32.6	1.38	37.9	1.71	40.0	1.89	40.5	2.07	42.3	2.13	43.3	2.15
	85	27.3	1.16	32.6	1.47	37.9	1.83	39.3	2.01	39.8	2.20	41.6	2.22	42.7	2.24
	90	27.3	1.31	32.6	1.67	37.7	2.07	38.2	2.29	38.7	2.37	40.5	2.39	41.5	2.42
	95	27.3	1.39	32.6	1.78	37.0	2.22	**37.5**	**2.45**	38.0	2.46	39.8	2.48	40.8	2.50
	100	27.3	1.51	32.6	1.93	36.5	2.40	37.0	2.58	37.5	2.59	39.3	2.62	40.3	2.64
	105	27.3	1.70	32.6	2.18	35.4	2.71	35.9	2.77	36.4	2.79	38.1	2.81	39.1	2.84
	110	27.3	1.91	32.6	2.46	34.3	2.95	34.4	2.97	34.9	2.98	36.0	3.01	36.1	3.04
	115	27.3	2.21	32.6	2.82	32.9	3.11	32.9	3.11	33.0	3.11	33.7	3.12	33.8	3.13
	118	26.4	2.01	28.3	2.39	28.6	2.62	28.6	2.64	28.7	2.64	29.3	2.65	29.2	2.65
	122	21.1	1.53	22.7	1.82	22.8	1.99	22.9	2.00	23.0	2.00	23.5	2.01	23.5	2.01
100	-9.9	24.3	0.57	28.9	0.68	33.6	0.81	36.0	0.88	39.6	0.96	44.4	1.10	46.8	1.15
	-5	24.3	0.60	28.9	0.72	33.6	0.86	36.0	0.93	39.6	1.01	44.4	1.16	46.8	1.21
	0	24.3	0.62	28.9	0.75	33.6	0.89	36.0	0.97	39.6	1.05	44.4	1.21	46.8	1.26
	5	24.3	0.65	28.9	0.78	33.6	0.92	36.0	1.01	39.6	1.09	44.4	1.26	46.8	1.31
	10	24.3	0.66	28.9	0.80	33.6	0.95	36.0	1.03	39.6	1.12	44.4	1.29	46.8	1.34
	14	24.3	0.69	28.9	0.83	33.6	0.98	36.0	1.07	39.6	1.16	44.4	1.34	46.8	1.39
	20	24.3	0.71	28.9	0.86	33.6	1.01	36.0	1.10	39.6	1.20	44.4	1.38	46.8	1.43
	25	24.3	0.73	28.9	0.88	33.6	1.04	36.0	1.13	39.6	1.23	44.4	1.41	46.8	1.47
	30	24.3	0.75	28.9	0.90	33.6	1.07	36.0	1.15	39.6	1.26	44.4	1.44	46.8	1.50
	35	24.3	0.76	28.9	0.92	33.6	1.08	36.0	1.17	39.6	1.28	44.4	1.47	46.8	1.52
	40	24.3	0.77	28.9	0.93	33.6	1.10	36.0	1.19	39.6	1.30	44.4	1.49	46.8	1.55
	45	24.3	0.79	28.9	0.95	33.6	1.12	36.0	1.22	39.6	1.32	44.4	1.52	46.8	1.58
	50	24.3	0.80	28.9	0.97	33.6	1.15	36.0	1.24	39.6	1.35	44.4	1.55	46.8	1.61
	55	24.3	0.81	28.9	0.99	33.6	1.17	36.0	1.27	39.6	1.38	44.4	1.58	46.4	1.64
	60	24.3	0.84	28.9	1.02	33.6	1.22	36.0	1.31	39.6	1.43	44.2	1.63	45.0	1.67
	65	24.3	0.86	28.9	1.04	33.6	1.24	36.0	1.34	39.6	1.46	43.5	1.68	44.5	1.71
	70	24.3	0.89	28.9	1.08	33.6	1.32	36.0	1.46	39.6	1.62	42.7	1.80	43.5	1.83
	75	24.3	0.91	28.9	1.15	33.6	1.42	36.0	1.56	39.6	1.74	42.0	1.89	43.0	1.91
	80	24.3	1.03	28.9	1.31	33.6	1.62	36.0	1.79	39.6	2.00	40.9	2.05	41.7	2.08
	85	24.3	1.10	28.9	1.39	33.6	1.73	36.0	1.91	39.4	2.12	40.2	2.13	41.2	2.16
	90	24.3	1.24	28.9	1.59	33.6	1.97	36.0	2.17	38.1	2.28	39.1	2.30	39.9	2.33
	95	24.3	1.32	28.9	1.69	33.6	2.10	**36.0**	**2.32**	37.6	2.36	38.4	2.39	39.4	2.42
	100	24.3	1.42	28.9	1.82	33.6	2.27	35.4	2.44	36.9	2.49	37.9	2.51	38.8	2.54
	105	24.3	1.60	28.9	2.05	33.4	2.55	34.4	2.61	35.8	2.66	36.8	2.69	37.7	2.72
	110	24.3	1.79	28.9	2.30	33.0	2.77	33.8	2.78	34.5	2.84	35.0	2.86	35.6	2.90
	115	24.3	2.06	28.9	2.63	31.4	2.90	32.4	2.90	33.2	2.94	33.5	2.95	33.7	2.97
	118	24.3	2.07	25.4	2.47	27.4	2.44	28.2	2.46	28.9	2.50	29.2	2.50	29.1	2.52
	122	20.8	1.88	20.4	1.88	21.8	1.86	22.5	1.86	23.2	1.89	23.4	1.90	23.4	1.91

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM036GSS0

MULTI V™ S WITH LGRED°

Table 24: ZRUM036GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
90	-9.9	21.9	0.51	26.0	0.61	30.4	0.72	32.5	0.77	34.6	0.82	38.7	0.95	42.9	1.04
	-5	21.9	0.53	26.0	0.64	30.4	0.76	32.5	0.81	34.6	0.87	38.7	1.00	42.9	1.10
	0	21.9	0.56	26.0	0.67	30.4	0.79	32.5	0.85	34.6	0.90	38.7	1.04	42.9	1.14
	5	21.9	0.58	26.0	0.69	30.4	0.81	32.5	0.88	34.6	0.94	38.7	1.08	42.9	1.18
	10	21.9	0.59	26.0	0.71	30.4	0.84	32.5	0.90	34.6	0.96	38.7	1.11	42.9	1.22
	14	21.9	0.61	26.0	0.74	30.4	0.87	32.5	0.93	34.6	1.00	38.7	1.15	42.9	1.26
	20	21.9	0.64	26.0	0.76	30.4	0.90	32.5	0.97	34.6	1.04	38.7	1.19	42.9	1.31
	25	21.9	0.65	26.0	0.79	30.4	0.93	32.5	1.00	34.6	1.07	38.7	1.22	42.9	1.35
	30	21.9	0.67	26.0	0.81	30.4	0.96	32.5	1.03	34.6	1.11	38.7	1.26	42.9	1.39
	35	21.9	0.69	26.0	0.84	30.4	0.98	32.5	1.06	34.6	1.14	38.7	1.30	42.9	1.43
	40	21.9	0.71	26.0	0.86	30.4	1.01	32.5	1.09	34.6	1.18	38.7	1.34	42.9	1.48
	45	21.9	0.73	26.0	0.88	30.4	1.04	32.5	1.12	34.6	1.20	38.7	1.37	42.9	1.51
	50	21.9	0.75	26.0	0.90	30.4	1.06	32.5	1.14	34.6	1.23	38.7	1.40	42.9	1.54
	55	21.9	0.76	26.0	0.91	30.4	1.08	32.5	1.17	34.6	1.25	38.7	1.43	42.9	1.56
	60	21.9	0.78	26.0	0.95	30.4	1.12	32.5	1.21	34.6	1.30	38.7	1.48	42.6	1.58
	65	21.9	0.80	26.0	0.97	30.4	1.14	32.5	1.24	34.6	1.33	38.7	1.51	42.3	1.65
	70	21.9	0.82	26.0	1.00	30.4	1.18	32.5	1.30	34.6	1.42	38.7	1.68	41.5	1.78
	75	21.9	0.83	26.0	1.04	30.4	1.27	32.5	1.40	34.6	1.53	38.7	1.75	40.8	1.86
	80	21.9	0.94	26.0	1.18	30.4	1.45	32.5	1.59	34.6	1.75	38.7	1.94	39.7	2.02
	85	21.9	1.00	26.0	1.26	30.4	1.55	32.5	1.70	34.6	1.87	38.3	2.04	39.1	2.10
	90	21.9	1.12	26.0	1.42	30.4	1.76	32.5	1.94	34.6	2.12	37.1	2.24	37.9	2.27
	95	21.9	1.20	26.0	1.51	30.4	1.87	**32.5**	**2.06**	34.6	2.27	36.5	2.32	37.3	2.35
	100	21.9	1.24	26.0	1.58	30.4	1.95	32.5	2.15	34.6	2.32	36.0	2.42	36.6	2.45
	105	21.9	1.43	26.0	1.83	30.4	2.20	32.5	2.35	34.2	2.48	34.9	2.59	35.4	2.63
	110	21.9	1.65	26.0	2.11	30.4	2.42	32.5	2.54	32.8	2.69	33.2	2.79	33.5	2.82
	115	21.9	1.78	26.0	2.29	28.4	2.55	30.8	2.66	31.2	2.78	31.5	2.84	31.6	2.88
	118	21.9	1.89	25.4	2.47	24.8	2.14	26.8	2.25	27.2	2.36	27.4	2.41	27.3	2.44
	122	20.8	1.88	20.4	1.88	19.7	1.63	21.4	1.70	21.8	1.79	22.0	1.83	22.0	1.86
80	-9.9	19.4	0.44	23.1	0.53	27.0	0.61	28.8	0.67	30.7	0.72	34.4	0.82	38.1	0.91
	-5	19.4	0.46	23.1	0.56	27.0	0.65	28.8	0.70	30.7	0.76	34.4	0.86	38.1	0.96
	0	19.4	0.48	23.1	0.58	27.0	0.67	28.8	0.73	30.7	0.79	34.4	0.90	38.1	1.00
	5	19.4	0.50	23.1	0.60	27.0	0.70	28.8	0.76	30.7	0.82	34.4	0.93	38.1	1.04
	10	19.4	0.51	23.1	0.62	27.0	0.72	28.8	0.78	30.7	0.84	34.4	0.96	38.1	1.07
	14	19.4	0.53	23.1	0.64	27.0	0.74	28.8	0.81	30.7	0.87	34.4	0.99	38.1	1.11
	20	19.4	0.55	23.1	0.66	27.0	0.77	28.8	0.84	30.7	0.90	34.4	1.03	38.1	1.15
	25	19.4	0.57	23.1	0.68	27.0	0.80	28.8	0.86	30.7	0.93	34.4	1.06	38.1	1.19
	30	19.4	0.59	23.1	0.70	27.0	0.82	28.8	0.89	30.7	0.95	34.4	1.09	38.1	1.22
	35	19.4	0.60	23.1	0.72	27.0	0.85	28.8	0.91	30.7	0.98	34.4	1.12	38.1	1.26
	40	19.4	0.62	23.1	0.74	27.0	0.87	28.8	0.94	30.7	1.00	34.4	1.15	38.1	1.29
	45	19.4	0.63	23.1	0.75	27.0	0.88	28.8	0.95	30.7	1.02	34.4	1.17	38.1	1.31
	50	19.4	0.63	23.1	0.76	27.0	0.89	28.8	0.96	30.7	1.03	34.4	1.18	38.1	1.32
	55	19.4	0.64	23.1	0.77	27.0	0.91	28.8	0.98	30.7	1.05	34.4	1.21	38.1	1.35
	60	19.4	0.67	23.1	0.80	27.0	0.94	28.8	1.02	30.7	1.09	34.4	1.25	38.1	1.40
	65	19.4	0.68	23.1	0.82	27.0	0.96	28.8	1.03	30.7	1.11	34.4	1.27	38.1	1.43
	70	19.4	0.70	23.1	0.84	27.0	0.99	28.8	1.07	30.7	1.16	34.4	1.37	38.1	1.59
	75	19.4	0.71	23.1	0.85	27.0	1.04	28.8	1.14	30.7	1.24	34.4	1.46	38.1	1.67
	80	19.4	0.78	23.1	0.97	27.0	1.18	28.8	1.29	30.7	1.41	34.4	1.68	38.1	1.87
	85	19.4	0.83	23.1	1.03	27.0	1.26	28.8	1.38	30.7	1.51	34.4	1.79	38.1	1.92
	90	19.4	0.93	23.1	1.17	27.0	1.42	28.8	1.57	30.7	1.72	34.4	1.96	37.5	2.03
	95	19.4	0.99	23.1	1.24	27.0	1.52	**28.8**	**1.66**	30.7	1.83	34.4	2.03	36.7	2.09
	100	19.4	1.07	23.1	1.33	27.0	1.64	28.8	1.78	30.7	1.90	34.4	2.11	35.8	2.15
	105	19.4	1.22	23.1	1.53	27.0	1.83	28.8	1.91	30.7	2.04	34.0	2.20	34.8	2.26
	110	19.4	1.38	23.1	1.74	27.0	1.94	28.8	2.04	30.7	2.19	32.8	2.28	32.9	2.38
	115	19.4	1.48	23.1	1.86	27.0	2.00	28.8	2.15	28.8	2.25	28.9	2.33	28.9	2.47
	118	19.4	1.57	23.1	1.98	24.8	2.14	25.3	2.04	25.0	1.91	25.2	1.98	25.0	2.10
	122	19.4	1.69	20.4	1.86	19.7	1.63	20.2	1.54	20.1	1.44	20.2	1.50	20.1	1.59

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM036GSS0

Table 25: ZRUM036GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-9.9	17.0	0.39	20.3	0.46	23.6	0.54	25.2	0.58	26.8	0.62	30.1	0.71	33.4	0.79
	-5	17.0	0.41	20.3	0.49	23.6	0.57	25.2	0.61	26.8	0.65	30.1	0.75	33.4	0.83
	0	17.0	0.42	20.3	0.50	23.6	0.59	25.2	0.64	26.8	0.68	30.1	0.78	33.4	0.87
	5	17.0	0.44	20.3	0.52	23.6	0.62	25.2	0.66	26.8	0.70	30.1	0.80	33.4	0.90
	10	17.0	0.45	20.3	0.54	23.6	0.63	25.2	0.68	26.8	0.72	30.1	0.83	33.4	0.93
	14	17.0	0.47	20.3	0.56	23.6	0.66	25.2	0.70	26.8	0.75	30.1	0.86	33.4	0.96
	20	17.0	0.49	20.3	0.58	23.6	0.68	25.2	0.73	26.8	0.77	30.1	0.88	33.4	0.99
	25	17.0	0.50	20.3	0.59	23.6	0.69	25.2	0.74	26.8	0.80	30.1	0.91	33.4	1.02
	30	17.0	0.51	20.3	0.61	23.6	0.71	25.2	0.76	26.8	0.82	30.1	0.93	33.4	1.05
	35	17.0	0.53	20.3	0.62	23.6	0.73	25.2	0.78	26.8	0.84	30.1	0.95	33.4	1.07
	40	17.0	0.54	20.3	0.64	23.6	0.75	25.2	0.80	26.8	0.86	30.1	0.98	33.4	1.10
	45	17.0	0.55	20.3	0.65	23.6	0.76	25.2	0.82	26.8	0.87	30.1	1.00	33.4	1.12
	50	17.0	0.56	20.3	0.66	23.6	0.77	25.2	0.83	26.8	0.89	30.1	1.01	33.4	1.14
	55	17.0	0.57	20.3	0.67	23.6	0.79	25.2	0.84	26.8	0.91	30.1	1.03	33.4	1.16
	60	17.0	0.58	20.3	0.70	23.6	0.82	25.2	0.88	26.8	0.94	30.1	1.07	33.4	1.21
	65	17.0	0.59	20.3	0.71	23.6	0.83	25.2	0.89	26.8	0.96	30.1	1.09	33.4	1.22
	70	17.0	0.61	20.3	0.73	23.6	0.85	25.2	0.92	26.8	0.99	30.1	1.13	33.4	1.30
	75	17.0	0.62	20.3	0.74	23.6	0.87	25.2	0.95	26.8	1.03	30.1	1.21	33.4	1.38
	80	17.0	0.67	20.3	0.82	23.6	0.99	25.2	1.08	26.8	1.17	30.1	1.33	33.4	1.53
	85	17.0	0.71	20.3	0.87	23.6	1.05	25.2	1.15	26.8	1.26	30.1	1.42	33.4	1.59
	90	17.0	0.80	20.3	0.98	23.6	1.19	25.2	1.30	26.8	1.42	30.1	1.58	33.4	1.73
	95	17.0	0.84	20.3	1.04	23.6	1.27	**25.2**	**1.39**	26.8	1.51	30.1	1.66	33.4	1.78
	100	17.0	0.91	20.3	1.13	23.6	1.37	25.2	1.50	26.8	1.56	30.1	1.74	33.4	1.83
	105	17.0	1.03	20.3	1.29	23.6	1.51	25.2	1.60	26.8	1.69	30.1	1.84	33.4	1.94
	110	17.0	1.16	20.3	1.46	23.6	1.60	25.2	1.69	26.8	1.83	30.1	1.91	32.5	2.09
	115	17.0	1.25	20.3	1.55	23.6	1.65	25.2	1.79	26.8	1.89	30.1	1.97	30.6	2.22
	118	17.0	1.32	20.3	1.65	23.6	1.76	25.2	1.90	24.4	1.89	25.2	1.67	25.0	1.88
	122	17.0	1.43	20.3	1.79	21.1	1.68	20.2	1.56	19.6	1.43	20.2	1.27	20.1	1.43
60	-9.9	14.6	0.34	17.4	0.39	20.3	0.46	21.5	0.49	23.0	0.53	25.9	0.60	28.6	0.67
	-5	14.6	0.35	17.4	0.41	20.3	0.48	21.5	0.52	23.0	0.55	25.9	0.63	28.6	0.70
	0	14.6	0.37	17.4	0.43	20.3	0.50	21.5	0.54	23.0	0.58	25.9	0.65	28.6	0.73
	5	14.6	0.38	17.4	0.44	20.3	0.52	21.5	0.56	23.0	0.60	25.9	0.68	28.6	0.76
	10	14.6	0.39	17.4	0.46	20.3	0.53	21.5	0.57	23.0	0.62	25.9	0.70	28.6	0.78
	14	14.6	0.41	17.4	0.47	20.3	0.55	21.5	0.59	23.0	0.64	25.9	0.72	28.6	0.81
	20	14.6	0.42	17.4	0.49	20.3	0.57	21.5	0.61	23.0	0.66	25.9	0.75	28.6	0.84
	25	14.6	0.43	17.4	0.50	20.3	0.59	21.5	0.63	23.0	0.68	25.9	0.77	28.6	0.86
	30	14.6	0.44	17.4	0.52	20.3	0.60	21.5	0.65	23.0	0.69	25.9	0.79	28.6	0.88
	35	14.6	0.45	17.4	0.53	20.3	0.62	21.5	0.66	23.0	0.71	25.9	0.81	28.6	0.90
	40	14.6	0.46	17.4	0.54	20.3	0.63	21.5	0.68	23.0	0.73	25.9	0.83	28.6	0.93
	45	14.6	0.47	17.4	0.55	20.3	0.64	21.5	0.69	23.0	0.74	25.9	0.83	28.6	0.93
	50	14.6	0.47	17.4	0.55	20.3	0.64	21.5	0.69	23.0	0.74	25.9	0.84	28.6	0.94
	55	14.6	0.48	17.4	0.56	20.3	0.66	21.5	0.71	23.0	0.75	25.9	0.86	28.6	0.96
	60	14.6	0.49	17.4	0.58	20.3	0.68	21.5	0.73	23.0	0.78	25.9	0.89	28.6	1.00
	65	14.6	0.50	17.4	0.59	20.3	0.69	21.5	0.74	23.0	0.80	25.9	0.91	28.6	1.02
	70	14.6	0.51	17.4	0.61	20.3	0.71	21.5	0.76	23.0	0.82	25.9	0.93	28.6	1.06
	75	14.6	0.52	17.4	0.62	20.3	0.73	21.5	0.78	23.0	0.84	25.9	0.99	28.6	1.13
	80	14.6	0.55	17.4	0.68	20.3	0.81	21.5	0.89	23.0	0.96	25.9	1.10	28.6	1.27
	85	14.6	0.59	17.4	0.72	20.3	0.86	21.5	0.94	23.0	1.03	25.9	1.16	28.6	1.31
	90	14.6	0.66	17.4	0.81	20.3	0.98	21.5	1.07	23.0	1.15	25.9	1.30	28.6	1.43
	95	14.6	0.70	17.4	0.86	20.3	1.04	**21.5**	**1.14**	23.0	1.22	25.9	1.36	28.6	1.51
	100	14.6	0.75	17.4	0.92	20.3	1.12	21.5	1.22	23.0	1.28	25.9	1.44	28.6	1.57
	105	14.6	0.85	17.4	1.05	20.3	1.23	21.5	1.31	23.0	1.39	25.9	1.53	28.6	1.71
	110	14.6	0.96	17.4	1.20	20.3	1.33	21.5	1.39	23.0	1.50	25.9	1.64	28.6	1.87
	115	14.6	1.03	17.4	1.28	20.3	1.38	21.5	1.47	23.0	1.55	25.9	1.73	28.6	2.00
	118	14.6	1.09	17.4	1.35	20.3	1.47	21.5	1.56	23.0	1.65	25.2	1.67	25.0	1.88
	122	14.6	1.17	17.4	1.46	20.3	1.59	20.1	1.58	19.5	1.46	20.2	1.27	20.1	1.43

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

Table 26: ZRUM036GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
50	-9.9	12.2	0.29	14.5	0.34	16.9	0.38	18.0	0.41	19.1	0.44	21.5	0.49	23.8	0.54
	-5	12.2	0.30	14.5	0.36	16.9	0.40	18.0	0.43	19.1	0.46	21.5	0.52	23.8	0.57
	0	12.2	0.32	14.5	0.37	16.9	0.42	18.0	0.45	19.1	0.48	21.5	0.54	23.8	0.59
	5	12.2	0.33	14.5	0.39	16.9	0.43	18.0	0.47	19.1	0.50	21.5	0.56	23.8	0.62
	10	12.2	0.34	14.5	0.40	16.9	0.44	18.0	0.48	19.1	0.52	21.5	0.57	23.8	0.63
	14	12.2	0.35	14.5	0.41	16.9	0.46	18.0	0.50	19.1	0.53	21.5	0.59	23.8	0.66
	20	12.2	0.36	14.5	0.42	16.9	0.48	18.0	0.51	19.1	0.55	21.5	0.61	23.8	0.68
	25	12.2	0.37	14.5	0.44	16.9	0.50	18.0	0.53	19.1	0.57	21.5	0.63	23.8	0.70
	30	12.2	0.38	14.5	0.45	16.9	0.51	18.0	0.54	19.1	0.58	21.5	0.65	23.8	0.72
	35	12.2	0.39	14.5	0.46	16.9	0.52	18.0	0.56	19.1	0.60	21.5	0.67	23.8	0.74
	40	12.2	0.40	14.5	0.47	16.9	0.54	18.0	0.57	19.1	0.61	21.5	0.68	23.8	0.76
	45	12.2	0.41	14.5	0.48	16.9	0.55	18.0	0.58	19.1	0.62	21.5	0.69	23.8	0.77
	50	12.2	0.42	14.5	0.48	16.9	0.55	18.0	0.59	19.1	0.63	21.5	0.70	23.8	0.78
	55	12.2	0.43	14.5	0.49	16.9	0.56	18.0	0.60	19.1	0.64	21.5	0.72	23.8	0.80
	60	12.2	0.43	14.5	0.50	16.9	0.58	18.0	0.62	19.1	0.66	21.5	0.74	23.8	0.83
	65	12.2	0.44	14.5	0.51	16.9	0.59	18.0	0.63	19.1	0.67	21.5	0.75	23.8	0.84
	70	12.2	0.45	14.5	0.52	16.9	0.60	18.0	0.65	19.1	0.69	21.5	0.77	23.8	0.87
	75	12.2	0.46	14.5	0.53	16.9	0.62	18.0	0.66	19.1	0.70	21.5	0.79	23.8	0.89
	80	12.2	0.47	14.5	0.56	16.9	0.66	18.0	0.71	19.1	0.77	21.5	0.88	23.8	1.01
	85	12.2	0.50	14.5	0.59	16.9	0.70	18.0	0.76	19.1	0.81	21.5	0.94	23.8	1.07
	90	12.2	0.56	14.5	0.66	16.9	0.79	18.0	0.85	19.1	0.92	21.5	1.06	23.8	1.21
	95	12.2	0.59	14.5	0.70	16.9	0.83	**18.0**	**0.90**	19.1	0.97	21.5	1.12	23.8	1.29
	100	12.2	0.62	14.5	0.74	16.9	0.88	18.0	0.96	19.1	1.03	21.5	1.20	23.8	1.37
	105	12.2	0.68	14.5	0.82	16.9	0.97	18.0	1.06	19.1	1.14	21.5	1.32	23.8	1.52
	110	12.2	0.75	14.5	0.91	16.9	1.08	18.0	1.17	19.1	1.27	21.5	1.48	23.8	1.70
	115	12.2	0.80	14.5	0.97	16.9	1.16	18.0	1.26	19.1	1.37	21.5	1.59	23.8	1.83
	118	12.2	0.87	14.5	1.06	16.9	1.26	18.0	1.37	19.1	1.49	21.5	1.67	23.8	1.88
	122	12.2	0.96	14.5	1.17	16.9	1.39	18.0	1.52	19.1	1.46	20.2	1.27	20.1	1.43

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80°F dry bulb (DB) and 67°F wet bulb (WB), and outdoor ambient conditions of 95°F dry bulb (DB) and 75°F wet bulb (WB).

COOLING CAPACITY

ZRUM048GSS0

Table 27: ZRUM048GSS0 Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-9.9	43.6	1.14	51.8	1.38	60.3	1.64	62.5	1.77	63.4	1.91	65.6	2.19	67.1	2.26
	-5	43.6	1.20	51.8	1.46	60.3	1.73	62.5	1.87	63.4	2.02	65.6	2.31	67.1	2.39
	0	43.6	1.25	51.8	1.52	60.3	1.80	62.5	1.94	63.4	2.10	65.6	2.41	67.1	2.48
	5	43.6	1.30	51.8	1.57	60.3	1.87	62.5	2.02	63.4	2.17	65.6	2.49	67.1	2.58
	10	43.6	1.33	51.8	1.62	60.3	1.92	62.5	2.07	63.4	2.24	65.6	2.56	67.1	2.65
	14	43.6	1.38	51.8	1.68	60.3	1.99	62.5	2.15	63.4	2.32	65.6	2.66	67.1	2.75
	20	43.6	1.41	51.8	1.70	60.3	2.02	62.5	2.18	63.4	2.35	65.6	2.69	67.1	2.79
	25	43.6	1.43	51.8	1.73	60.3	2.04	62.5	2.21	63.4	2.38	65.6	2.73	67.1	2.82
	30	43.6	1.45	51.8	1.75	60.3	2.07	62.5	2.24	63.4	2.40	65.6	2.76	67.1	2.85
	35	43.6	1.46	51.8	1.77	60.3	2.09	62.5	2.26	63.4	2.43	65.6	2.79	67.1	2.89
	40	43.6	1.48	51.8	1.79	60.3	2.12	62.5	2.29	63.4	2.46	65.6	2.82	67.1	2.92
	45	43.6	1.50	51.8	1.81	60.3	2.14	62.5	2.31	63.4	2.49	65.6	2.85	67.1	2.95
	50	43.6	1.51	51.8	1.83	60.3	2.16	62.5	2.34	63.4	2.51	65.6	2.88	67.1	2.98
	55	43.6	1.54	51.8	1.86	60.3	2.20	61.6	2.39	62.5	2.56	64.7	2.93	66.2	3.00
	60	43.6	1.59	51.8	1.93	59.4	2.30	60.2	2.48	60.9	2.66	63.1	3.02	64.7	3.03
	65	43.6	1.62	51.8	1.97	58.5	2.34	59.4	2.53	60.0	2.71	62.2	3.12	63.8	3.15
	70	43.6	1.56	51.8	1.89	57.4	2.33	58.1	2.56	58.9	2.81	61.1	3.12	62.7	3.15
	75	43.6	1.60	51.8	2.02	56.5	2.49	57.2	2.75	58.1	3.01	60.2	3.27	61.8	3.30
	80	43.6	1.82	51.8	2.30	54.9	2.85	55.6	3.15	56.5	3.46	58.6	3.55	60.2	3.58
	85	43.6	1.93	51.8	2.45	54.1	3.05	54.9	3.36	55.6	3.67	57.7	3.70	59.3	3.73
	90	43.6	2.19	51.0	2.79	52.5	3.46	53.2	3.82	54.1	3.96	56.2	3.99	57.7	4.03
	95	44.1	2.32	50.6	2.97	52.2	3.69	**53.1**	**4.08**	53.7	4.10	55.9	4.14	57.4	4.18
	100	44.1	2.51	49.7	3.21	51.3	4.00	52.2	4.30	52.8	4.32	55.2	4.36	56.8	4.40
	105	44.1	2.83	48.4	3.63	49.9	4.51	50.7	4.62	51.5	4.64	53.3	4.69	54.0	4.73
	110	44.1	3.18	46.4	4.09	48.3	4.92	48.5	4.95	49.2	4.97	50.2	5.01	50.4	5.06
	115	43.9	3.68	44.7	4.71	44.7	5.19	44.7	5.19	44.7	5.19	45.3	5.20	45.5	5.21
	118	38.2	3.12	38.9	3.99	38.9	4.37	38.9	4.40	38.9	4.40	39.5	4.41	39.3	4.42
	122	30.5	2.37	31.2	3.03	31.0	3.32	31.1	3.33	31.2	3.34	31.7	3.34	31.6	3.36
120	-9.9	39.7	1.07	47.4	1.30	55.1	1.54	59.0	1.66	61.7	1.79	64.5	2.06	65.8	2.12
	-5	39.7	1.13	47.4	1.37	55.1	1.63	59.0	1.75	61.7	1.89	64.5	2.17	65.8	2.24
	0	39.7	1.18	47.4	1.43	55.1	1.69	59.0	1.82	61.7	1.97	64.5	2.26	65.8	2.33
	5	39.7	1.22	47.4	1.48	55.1	1.75	59.0	1.89	61.7	2.04	64.5	2.34	65.8	2.42
	10	39.7	1.26	47.4	1.52	55.1	1.80	59.0	1.95	61.7	2.10	64.5	2.41	65.8	2.49
	14	39.7	1.30	47.4	1.58	55.1	1.87	59.0	2.02	61.7	2.17	64.5	2.49	65.8	2.58
	20	39.7	1.32	47.4	1.60	55.1	1.90	59.0	2.05	61.7	2.21	64.5	2.53	65.8	2.61
	25	39.7	1.34	47.4	1.62	55.1	1.92	59.0	2.07	61.7	2.23	64.5	2.56	65.8	2.65
	30	39.7	1.36	47.4	1.64	55.1	1.94	59.0	2.10	61.7	2.26	64.5	2.59	65.8	2.68
	35	39.7	1.38	47.4	1.66	55.1	1.97	59.0	2.13	61.7	2.28	64.5	2.62	65.8	2.71
	40	39.7	1.39	47.4	1.68	55.1	1.99	59.0	2.15	61.7	2.31	64.5	2.65	65.8	2.74
	45	39.7	1.41	47.4	1.70	55.1	2.01	59.0	2.18	61.7	2.34	64.5	2.68	65.8	2.78
	50	39.7	1.42	47.4	1.72	55.1	2.04	59.0	2.20	61.7	2.37	64.5	2.71	65.8	2.81
	55	39.7	1.45	47.4	1.75	55.1	2.07	59.0	2.25	61.0	2.41	63.6	2.76	65.1	2.83
	60	39.7	1.49	47.4	1.82	55.1	2.16	58.6	2.33	59.3	2.51	62.0	2.85	63.3	2.90
	65	39.7	1.52	47.4	1.85	55.1	2.20	57.7	2.38	58.6	2.55	61.1	2.94	62.7	2.96
	70	39.7	1.50	47.4	1.82	55.1	2.24	56.6	2.46	57.3	2.70	60.0	3.00	61.3	3.03
	75	39.7	1.53	47.4	1.94	55.1	2.39	55.7	2.64	56.6	2.89	59.1	3.14	60.7	3.16
	80	39.7	1.74	47.4	2.21	53.5	2.74	54.2	3.02	54.9	3.32	57.5	3.41	58.9	3.44
	85	39.7	1.85	47.4	2.36	52.7	2.92	53.3	3.22	54.2	3.52	56.6	3.55	58.2	3.58
	90	39.7	2.10	47.4	2.68	51.1	3.32	51.8	3.67	52.4	3.80	55.1	3.83	56.4	3.87
	95	40.1	2.23	47.9	2.85	50.8	3.54	**51.4**	**3.92**	52.3	3.93	54.7	3.97	56.3	4.01
	100	40.1	2.41	47.9	3.08	49.9	3.84	50.8	4.12	51.4	4.15	54.1	4.19	55.4	4.22
	105	40.1	2.72	47.1	3.49	48.6	4.34	49.4	4.43	50.0	4.46	52.5	4.50	53.4	4.54
	110	40.1	3.05	45.9	3.93	47.4	4.73	47.6	4.75	48.3	4.77	49.8	4.81	50.0	4.86
	115	39.0	3.53	44.3	4.52	44.3	4.98	44.3	4.98	44.3	4.98	45.3	4.99	45.5	5.00
	118	34.8	3.12	38.5	3.83	38.5	4.19	38.5	4.23	38.5	4.23	39.5	4.24	39.3	4.24
	122	27.8	2.37	30.9	2.91	30.7	3.19	30.8	3.20	30.9	3.20	31.7	3.21	31.6	3.22

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM048GSS0

MULTI V™ S WITH LGRED°

Table 28: ZRUM048GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
110	-9.9	36.8	0.99	43.9	1.19	51.0	1.41	54.6	1.53	58.1	1.64	64.0	1.87	65.4	1.94
	-5	36.8	1.04	43.9	1.26	51.0	1.49	54.6	1.62	58.1	1.73	64.0	1.98	65.4	2.05
	0	36.8	1.09	43.9	1.31	51.0	1.55	54.6	1.68	58.1	1.80	64.0	2.06	65.4	2.13
	5	36.8	1.13	43.9	1.36	51.0	1.61	54.6	1.74	58.1	1.87	64.0	2.13	65.4	2.21
	10	36.8	1.16	43.9	1.40	51.0	1.65	54.6	1.79	58.1	1.92	64.0	2.19	65.4	2.28
	14	36.8	1.20	43.9	1.45	51.0	1.71	54.6	1.86	58.1	1.99	64.0	2.27	65.4	2.36
	20	36.8	1.22	43.9	1.47	51.0	1.74	54.6	1.89	58.1	2.02	64.0	2.31	65.4	2.39
	25	36.8	1.23	43.9	1.49	51.0	1.76	54.6	1.91	58.1	2.05	64.0	2.34	65.4	2.42
	30	36.8	1.25	43.9	1.51	51.0	1.78	54.6	1.93	58.1	2.07	64.0	2.38	65.4	2.46
	35	36.8	1.27	43.9	1.53	51.0	1.81	54.6	1.96	58.1	2.10	64.0	2.41	65.4	2.50
	40	36.8	1.28	43.9	1.55	51.0	1.83	54.6	1.98	58.1	2.13	64.0	2.44	65.4	2.53
	45	36.8	1.30	43.9	1.58	51.0	1.86	54.6	2.02	58.1	2.17	64.0	2.48	65.4	2.57
	50	36.8	1.32	43.9	1.60	51.0	1.90	54.6	2.05	58.1	2.20	64.0	2.52	65.4	2.61
	55	36.8	1.35	43.9	1.63	51.0	1.93	54.6	2.09	58.1	2.25	63.1	2.57	64.5	2.63
	60	36.8	1.39	43.9	1.69	51.0	2.01	54.6	2.17	58.1	2.33	61.5	2.65	62.9	2.67
	65	36.8	1.42	43.9	1.73	51.0	2.05	54.6	2.22	58.1	2.38	60.6	2.74	62.0	2.76
	70	36.8	1.43	43.9	1.74	51.0	2.14	54.6	2.36	57.0	2.59	59.5	2.88	60.8	2.90
	75	36.8	1.47	43.9	1.86	51.0	2.29	54.6	2.53	56.1	2.78	58.6	3.01	59.9	3.03
	80	36.4	1.67	43.5	2.12	50.5	2.62	53.3	2.90	54.0	3.18	56.4	3.27	57.8	3.30
	85	36.4	1.78	43.5	2.26	50.5	2.80	52.5	3.09	53.1	3.38	55.5	3.41	56.9	3.43
	90	36.4	2.01	43.5	2.57	50.3	3.18	50.9	3.52	51.6	3.64	54.0	3.67	55.3	3.71
	95	36.4	2.14	43.5	2.73	49.4	3.40	**50.0**	**3.76**	**50.7**	3.77	53.1	3.81	54.4	3.84
	100	36.4	2.31	43.5	2.95	48.7	3.68	49.4	3.95	50.0	3.98	52.4	4.01	53.7	4.05
	105	36.4	2.61	43.5	3.34	47.2	4.16	47.9	4.25	48.5	4.28	50.8	4.31	52.1	4.35
	110	36.4	2.93	43.5	3.77	45.7	4.53	45.9	4.56	46.6	4.57	48.0	4.62	48.2	4.66
	115	36.4	3.39	43.5	4.33	43.8	4.78	43.8	4.78	44.0	4.78	44.9	4.79	45.1	4.80
	118	35.2	3.09	37.8	3.67	38.1	4.02	38.1	4.05	38.3	4.05	39.1	4.06	38.9	4.07
	122	28.1	2.34	30.3	2.79	30.4	3.06	30.5	3.07	30.7	3.07	31.4	3.08	31.3	3.09
100	-9.9	32.4	0.87	38.6	1.05	44.8	1.24	48.0	1.36	52.8	1.47	59.2	1.69	62.5	1.76
	-5	32.4	0.92	38.6	1.11	44.8	1.31	48.0	1.43	52.8	1.55	59.2	1.79	62.5	1.86
	0	32.4	0.96	38.6	1.15	44.8	1.37	48.0	1.49	52.8	1.61	59.2	1.86	62.5	1.93
	5	32.4	0.99	38.6	1.19	44.8	1.42	48.0	1.54	52.8	1.67	59.2	1.93	62.5	2.01
	10	32.4	1.02	38.6	1.23	44.8	1.46	48.0	1.59	52.8	1.72	59.2	1.98	62.5	2.06
	14	32.4	1.06	38.6	1.27	44.8	1.51	48.0	1.64	52.8	1.78	59.2	2.05	62.5	2.14
	20	32.4	1.09	38.6	1.31	44.8	1.56	48.0	1.69	52.8	1.84	59.2	2.11	62.5	2.20
	25	32.4	1.12	38.6	1.35	44.8	1.60	48.0	1.73	52.8	1.88	59.2	2.16	62.5	2.25
	30	32.4	1.14	38.6	1.38	44.8	1.64	48.0	1.77	52.8	1.93	59.2	2.21	62.5	2.30
	35	32.4	1.16	38.6	1.41	44.8	1.66	48.0	1.80	52.8	1.96	59.2	2.25	62.5	2.34
	40	32.4	1.18	38.6	1.43	44.8	1.69	48.0	1.83	52.8	1.99	59.2	2.28	62.5	2.37
	45	32.4	1.21	38.6	1.46	44.8	1.72	48.0	1.87	52.8	2.03	59.2	2.33	62.5	2.42
	50	32.4	1.23	38.6	1.49	44.8	1.76	48.0	1.90	52.8	2.08	59.2	2.38	62.5	2.47
	55	32.4	1.25	38.6	1.52	44.8	1.79	48.0	1.94	52.8	2.12	59.2	2.42	61.8	2.51
	60	32.4	1.29	38.6	1.57	44.8	1.87	48.0	2.02	52.8	2.20	58.9	2.50	60.0	2.56
	65	32.4	1.32	38.6	1.60	44.8	1.90	48.0	2.06	52.8	2.24	58.0	2.58	59.4	2.63
	70	32.4	1.36	38.6	1.65	44.8	2.03	48.0	2.24	52.8	2.49	56.9	2.77	58.0	2.81
	75	32.4	1.39	38.6	1.76	44.8	2.17	48.0	2.40	52.8	2.67	56.1	2.90	57.4	2.93
	80	32.4	1.58	38.6	2.00	44.8	2.49	48.0	2.74	52.8	3.06	54.5	3.14	55.6	3.19
	85	32.4	1.68	38.6	2.14	44.8	2.66	48.0	2.93	52.5	3.25	53.6	3.28	55.0	3.32
	90	32.4	1.91	38.6	2.43	44.8	3.02	48.0	3.34	50.8	3.50	52.1	3.53	53.2	3.58
	95	32.4	2.02	38.6	2.59	44.8	3.22	**48.0**	**3.56**	50.1	3.63	51.2	3.66	52.5	3.71
	100	32.4	2.19	38.6	2.79	44.8	3.48	47.1	3.74	49.2	3.81	50.5	3.85	51.7	3.90
	105	32.4	2.46	38.6	3.15	44.5	3.92	45.8	4.01	47.8	4.09	49.0	4.12	50.2	4.18
	110	32.4	2.75	38.6	3.53	44.0	4.25	45.0	4.27	45.9	4.35	46.7	4.39	47.5	4.46
	115	32.4	3.15	38.6	4.04	41.9	4.45	43.2	4.45	44.3	4.52	44.7	4.52	44.9	4.56
	118	32.4	3.18	33.8	3.79	36.5	3.74	37.6	3.78	38.6	3.83	38.9	3.84	38.8	3.87
	122	27.7	2.88	27.1	2.88	29.1	2.85	30.1	2.86	30.9	2.90	31.2	2.91	31.2	2.94

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM048GSS0

Table 29: ZRUM048GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
90	-9.9	29.1	0.78	34.7	0.93	40.5	1.10	43.3	1.18	46.1	1.26	51.6	1.45	57.2	1.60
	-5	29.1	0.82	34.7	0.98	40.5	1.16	43.3	1.25	46.1	1.33	51.6	1.53	57.2	1.68
	0	29.1	0.85	34.7	1.02	40.5	1.21	43.3	1.30	46.1	1.39	51.6	1.60	57.2	1.75
	5	29.1	0.88	34.7	1.06	40.5	1.25	43.3	1.34	46.1	1.44	51.6	1.65	57.2	1.82
	10	29.1	0.91	34.7	1.09	40.5	1.29	43.3	1.38	46.1	1.48	51.6	1.70	57.2	1.87
	14	29.1	0.94	34.7	1.13	40.5	1.33	43.3	1.43	46.1	1.53	51.6	1.76	57.2	1.94
	20	29.1	0.98	34.7	1.17	40.5	1.38	43.3	1.49	46.1	1.60	51.6	1.83	57.2	2.01
	25	29.1	1.00	34.7	1.21	40.5	1.42	43.3	1.53	46.1	1.65	51.6	1.88	57.2	2.07
	30	29.1	1.03	34.7	1.24	40.5	1.47	43.3	1.58	46.1	1.70	51.6	1.93	57.2	2.13
	35	29.1	1.06	34.7	1.28	40.5	1.51	43.3	1.63	46.1	1.75	51.6	1.99	57.2	2.20
	40	29.1	1.10	34.7	1.32	40.5	1.56	43.3	1.68	46.1	1.81	51.6	2.05	57.2	2.26
	45	29.1	1.12	34.7	1.35	40.5	1.59	43.3	1.72	46.1	1.85	51.6	2.10	57.2	2.32
	50	29.1	1.15	34.7	1.38	40.5	1.63	43.3	1.75	46.1	1.89	51.6	2.14	57.2	2.37
	55	29.1	1.16	34.7	1.40	40.5	1.65	43.3	1.79	46.1	1.92	51.6	2.19	57.2	2.39
	60	29.1	1.20	34.7	1.46	40.5	1.72	43.3	1.86	46.1	2.00	51.6	2.27	56.7	2.42
	65	29.1	1.22	34.7	1.49	40.5	1.75	43.3	1.90	46.1	2.04	51.6	2.31	56.4	2.54
	70	29.1	1.26	34.7	1.53	40.5	1.82	43.3	2.00	46.1	2.19	51.6	2.58	55.3	2.73
	75	29.1	1.28	34.7	1.60	40.5	1.94	43.3	2.14	46.1	2.35	51.6	2.69	54.4	2.85
	80	29.1	1.44	34.7	1.81	40.5	2.22	43.3	2.45	46.1	2.68	51.6	2.98	52.9	3.10
	85	29.1	1.53	34.7	1.93	40.5	2.38	43.3	2.61	46.1	2.86	51.0	3.13	52.1	3.22
	90	29.1	1.73	34.7	2.19	40.5	2.69	43.3	2.97	46.1	3.26	49.5	3.43	50.6	3.48
	95	29.1	1.84	34.7	2.32	40.5	2.87	**43.3**	**3.17**	46.1	3.48	48.6	3.56	49.7	3.61
	100	29.1	1.90	34.7	2.42	40.5	2.99	43.3	3.29	46.1	3.56	48.0	3.71	48.9	3.75
	105	29.1	2.20	34.7	2.81	40.5	3.38	43.3	3.61	45.6	3.81	46.5	3.98	47.1	4.03
	110	29.1	2.53	34.7	3.24	40.5	3.71	43.3	3.89	43.7	4.13	44.3	4.27	44.6	4.32
	115	29.1	2.74	34.7	3.51	37.9	3.91	41.0	4.07	41.6	4.27	42.0	4.36	42.2	4.42
	118	29.1	2.91	33.8	3.79	33.0	3.29	35.7	3.46	36.2	3.62	36.6	3.70	36.4	3.75
	122	27.7	2.88	27.1	2.88	26.3	2.50	28.6	2.61	29.0	2.74	29.4	2.80	29.3	2.85
80	-9.9	25.9	0.67	30.9	0.81	36.0	0.94	38.4	1.02	40.9	1.10	45.9	1.26	50.8	1.40
	-5	25.9	0.71	30.9	0.85	36.0	0.99	38.4	1.08	40.9	1.16	45.9	1.33	50.8	1.48
	0	25.9	0.74	30.9	0.89	36.0	1.03	38.4	1.12	40.9	1.21	45.9	1.38	50.8	1.54
	5	25.9	0.76	30.9	0.92	36.0	1.07	38.4	1.16	40.9	1.25	45.9	1.43	50.8	1.59
	10	25.9	0.79	30.9	0.95	36.0	1.10	38.4	1.20	40.9	1.29	45.9	1.47	50.8	1.64
	14	25.9	0.82	30.9	0.98	36.0	1.14	38.4	1.24	40.9	1.34	45.9	1.53	50.8	1.70
	20	25.9	0.85	30.9	1.02	36.0	1.19	38.4	1.29	40.9	1.38	45.9	1.58	50.8	1.76
	25	25.9	0.87	30.9	1.05	36.0	1.22	38.4	1.32	40.9	1.42	45.9	1.63	50.8	1.82
	30	25.9	0.90	30.9	1.08	36.0	1.26	38.4	1.36	40.9	1.46	45.9	1.67	50.8	1.87
	35	25.9	0.92	30.9	1.11	36.0	1.30	38.4	1.40	40.9	1.50	45.9	1.72	50.8	1.93
	40	25.9	0.95	30.9	1.14	36.0	1.33	38.4	1.44	40.9	1.54	45.9	1.77	50.8	1.98
	45	25.9	0.96	30.9	1.15	36.0	1.35	38.4	1.46	40.9	1.56	45.9	1.79	50.8	2.00
	50	25.9	0.97	30.9	1.17	36.0	1.37	38.4	1.48	40.9	1.58	45.9	1.81	50.8	2.03
	55	25.9	0.99	30.9	1.19	36.0	1.39	38.4	1.50	40.9	1.61	45.9	1.85	50.8	2.07
	60	25.9	1.02	30.9	1.23	36.0	1.44	38.4	1.56	40.9	1.68	45.9	1.91	50.8	2.15
	65	25.9	1.04	30.9	1.25	36.0	1.47	38.4	1.59	40.9	1.71	45.9	1.95	50.8	2.20
	70	25.9	1.07	30.9	1.29	36.0	1.52	38.4	1.64	40.9	1.78	45.9	2.10	50.8	2.43
	75	25.9	1.09	30.9	1.31	36.0	1.59	38.4	1.75	40.9	1.90	45.9	2.23	50.8	2.57
	80	25.9	1.19	30.9	1.49	36.0	1.81	38.4	1.98	40.9	2.17	45.9	2.57	50.8	2.87
	85	25.9	1.27	30.9	1.58	36.0	1.93	38.4	2.12	40.9	2.32	45.9	2.74	50.8	2.94
	90	25.9	1.43	30.9	1.79	36.0	2.19	38.4	2.40	40.9	2.64	45.9	3.01	50.0	3.12
	95	25.9	1.52	30.9	1.90	36.0	2.33	**38.4**	**2.55**	40.9	2.80	45.9	3.12	48.9	3.20
	100	25.9	1.64	30.9	2.05	36.0	2.52	38.4	2.73	40.9	2.91	45.9	3.24	47.8	3.30
	105	25.9	1.87	30.9	2.34	36.0	2.80	38.4	2.93	40.9	3.13	45.3	3.37	46.4	3.47
	110	25.9	2.12	30.9	2.67	36.0	2.97	38.4	3.13	40.9	3.37	43.7	3.50	43.9	3.65
	115	25.9	2.26	30.9	2.85	36.0	3.07	38.4	3.29	38.4	3.45	38.6	3.57	38.6	3.79
	118	25.9	2.40	30.9	3.03	33.0	3.29	33.7	3.13	33.4	2.92	33.6	3.03	33.3	3.22
	122	25.9	2.60	27.2	2.86	26.3	2.50	26.9	2.36	26.8	2.21	27.0	2.30	26.8	2.44

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM048GSS0

MULTI V™ S WITH LGRED°

Table 30: ZRUM048GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-9.9	22.7	0.59	27.0	0.71	31.5	0.83	33.6	0.89	35.8	0.95	40.1	1.08	44.6	1.21
	-5	22.7	0.63	27.0	0.74	31.5	0.88	33.6	0.94	35.8	1.00	40.1	1.14	44.6	1.28
	0	22.7	0.65	27.0	0.77	31.5	0.91	33.6	0.98	35.8	1.04	40.1	1.19	44.6	1.33
	5	22.7	0.68	27.0	0.80	31.5	0.94	33.6	1.01	35.8	1.08	40.1	1.23	44.6	1.38
	10	22.7	0.69	27.0	0.83	31.5	0.97	33.6	1.04	35.8	1.11	40.1	1.27	44.6	1.42
	14	22.7	0.72	27.0	0.86	31.5	1.01	33.6	1.08	35.8	1.15	40.1	1.32	44.6	1.47
	20	22.7	0.74	27.0	0.88	31.5	1.04	33.6	1.11	35.8	1.19	40.1	1.36	44.6	1.52
	25	22.7	0.77	27.0	0.91	31.5	1.06	33.6	1.14	35.8	1.22	40.1	1.39	44.6	1.56
	30	22.7	0.79	27.0	0.93	31.5	1.09	33.6	1.17	35.8	1.25	40.1	1.43	44.6	1.60
	35	22.7	0.81	27.0	0.96	31.5	1.12	33.6	1.20	35.8	1.29	40.1	1.46	44.6	1.65
	40	22.7	0.83	27.0	0.98	31.5	1.15	33.6	1.23	35.8	1.32	40.1	1.50	44.6	1.69
	45	22.7	0.84	27.0	1.00	31.5	1.17	33.6	1.26	35.8	1.34	40.1	1.53	44.6	1.72
	50	22.7	0.86	27.0	1.01	31.5	1.19	33.6	1.28	35.8	1.36	40.1	1.55	44.6	1.75
	55	22.7	0.87	27.0	1.03	31.5	1.21	33.6	1.30	35.8	1.39	40.1	1.58	44.6	1.78
	60	22.7	0.89	27.0	1.07	31.5	1.25	33.6	1.34	35.8	1.44	40.1	1.64	44.6	1.85
	65	22.7	0.91	27.0	1.09	31.5	1.27	33.6	1.37	35.8	1.47	40.1	1.67	44.6	1.88
	70	22.7	0.93	27.0	1.12	31.5	1.31	33.6	1.41	35.8	1.51	40.1	1.73	44.6	2.00
	75	22.7	0.95	27.0	1.14	31.5	1.34	33.6	1.46	35.8	1.58	40.1	1.85	44.6	2.12
	80	22.7	1.02	27.0	1.26	31.5	1.52	33.6	1.66	35.8	1.79	40.1	2.05	44.6	2.35
	85	22.7	1.09	27.0	1.34	31.5	1.62	33.6	1.77	35.8	1.93	40.1	2.18	44.6	2.45
	90	22.7	1.22	27.0	1.51	31.5	1.83	33.6	2.00	35.8	2.19	40.1	2.43	44.6	2.65
	95	22.7	1.29	27.0	1.60	31.5	1.95	**33.6**	**2.13**	35.8	2.32	40.1	2.55	44.6	2.73
	100	22.7	1.39	27.0	1.73	31.5	2.10	33.6	2.30	35.8	2.39	40.1	2.67	44.6	2.81
	105	22.7	1.58	27.0	1.97	31.5	2.32	33.6	2.45	35.8	2.60	40.1	2.82	44.6	2.98
	110	22.7	1.78	27.0	2.23	31.5	2.45	33.6	2.60	35.8	2.81	40.1	2.93	43.3	3.20
	115	22.7	1.91	27.0	2.38	31.5	2.54	33.6	2.75	35.8	2.90	40.1	3.02	40.8	3.41
	118	22.7	2.03	27.0	2.53	31.5	2.69	33.6	2.91	32.6	2.90	33.6	2.56	33.3	2.89
	122	22.7	2.19	27.0	2.74	28.1	2.57	26.9	2.40	26.1	2.19	27.0	1.94	26.8	2.20
60	-9.9	19.5	0.51	23.1	0.60	27.0	0.70	28.7	0.75	30.6	0.81	34.5	0.91	38.1	1.02
	-5	19.5	0.54	23.1	0.63	27.0	0.74	28.7	0.79	30.6	0.85	34.5	0.96	38.1	1.08
	0	19.5	0.56	23.1	0.66	27.0	0.77	28.7	0.82	30.6	0.89	34.5	1.00	38.1	1.12
	5	19.5	0.59	23.1	0.68	27.0	0.80	28.7	0.85	30.6	0.92	34.5	1.04	38.1	1.16
	10	19.5	0.60	23.1	0.70	27.0	0.82	28.7	0.88	30.6	0.94	34.5	1.07	38.1	1.19
	14	19.5	0.62	23.1	0.72	27.0	0.85	28.7	0.91	30.6	0.98	34.5	1.11	38.1	1.24
	20	19.5	0.64	23.1	0.75	27.0	0.88	28.7	0.94	30.6	1.01	34.5	1.14	38.1	1.28
	25	19.5	0.66	23.1	0.77	27.0	0.90	28.7	0.97	30.6	1.04	34.5	1.17	38.1	1.32
	30	19.5	0.67	23.1	0.79	27.0	0.92	28.7	0.99	30.6	1.06	34.5	1.21	38.1	1.35
	35	19.5	0.69	23.1	0.82	27.0	0.95	28.7	1.02	30.6	1.09	34.5	1.24	38.1	1.39
	40	19.5	0.71	23.1	0.84	27.0	0.97	28.7	1.04	30.6	1.12	34.5	1.27	38.1	1.42
	45	19.5	0.72	23.1	0.84	27.0	0.98	28.7	1.05	30.6	1.13	34.5	1.28	38.1	1.43
	50	19.5	0.72	23.1	0.85	27.0	0.99	28.7	1.06	30.6	1.14	34.5	1.29	38.1	1.45
	55	19.5	0.73	23.1	0.87	27.0	1.01	28.7	1.08	30.6	1.16	34.5	1.32	38.1	1.47
	60	19.5	0.76	23.1	0.89	27.0	1.04	28.7	1.12	30.6	1.20	34.5	1.36	38.1	1.53
	65	19.5	0.77	23.1	0.91	27.0	1.06	28.7	1.14	30.6	1.22	34.5	1.39	38.1	1.56
	70	19.5	0.79	23.1	0.93	27.0	1.09	28.7	1.17	30.6	1.26	34.5	1.43	38.1	1.62
	75	19.5	0.80	23.1	0.95	27.0	1.11	28.7	1.20	30.6	1.30	34.5	1.51	38.1	1.73
	80	19.5	0.85	23.1	1.04	27.0	1.25	28.7	1.36	30.6	1.47	34.5	1.69	38.1	1.95
	85	19.5	0.90	23.1	1.10	27.0	1.33	28.7	1.45	30.6	1.58	34.5	1.78	38.1	2.01
	90	19.5	1.01	23.1	1.25	27.0	1.50	28.7	1.64	30.6	1.77	34.5	1.99	38.1	2.20
	95	19.5	1.07	23.1	1.32	27.0	1.59	**28.7**	**1.75**	30.6	1.88	34.5	2.09	38.1	2.31
	100	19.5	1.15	23.1	1.42	27.0	1.72	28.7	1.88	30.6	1.96	34.5	2.21	38.1	2.41
	105	19.5	1.31	23.1	1.62	27.0	1.89	28.7	2.00	30.6	2.13	34.5	2.35	38.1	2.63
	110	19.5	1.47	23.1	1.83	27.0	2.04	28.7	2.13	30.6	2.30	34.5	2.51	38.1	2.87
	115	19.5	1.58	23.1	1.96	27.0	2.12	28.7	2.25	30.6	2.39	34.5	2.66	38.1	3.07
	118	19.5	1.67	23.1	2.08	27.0	2.25	28.7	2.39	30.6	2.54	33.6	2.56	33.3	2.89
	122	19.5	1.80	23.1	2.25	27.0	2.44	26.8	2.42	26.0	2.25	27.0	1.94	26.8	2.20

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM048GSS0

Table 31: ZRUM048GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
50	-9.9	16.2	0.44	19.3	0.52	22.5	0.58	24.0	0.63	25.5	0.68	28.7	0.75	31.7	0.83
	-5	16.2	0.47	19.3	0.55	22.5	0.61	24.0	0.66	25.5	0.71	28.7	0.79	31.7	0.88
	0	16.2	0.49	19.3	0.57	22.5	0.64	24.0	0.69	25.5	0.74	28.7	0.82	31.7	0.91
	5	16.2	0.50	19.3	0.59	22.5	0.66	24.0	0.71	25.5	0.77	28.7	0.85	31.7	0.95
	10	16.2	0.52	19.3	0.61	22.5	0.68	24.0	0.73	25.5	0.79	28.7	0.88	31.7	0.97
	14	16.2	0.54	19.3	0.63	22.5	0.71	24.0	0.76	25.5	0.82	28.7	0.91	31.7	1.01
	20	16.2	0.56	19.3	0.65	22.5	0.74	24.0	0.79	25.5	0.85	28.7	0.94	31.7	1.05
	25	16.2	0.57	19.3	0.67	22.5	0.76	24.0	0.81	25.5	0.87	28.7	0.97	31.7	1.08
	30	16.2	0.59	19.3	0.68	22.5	0.78	24.0	0.83	25.5	0.89	28.7	1.00	31.7	1.11
	35	16.2	0.61	19.3	0.70	22.5	0.80	24.0	0.86	25.5	0.91	28.7	1.03	31.7	1.14
	40	16.2	0.62	19.3	0.72	22.5	0.83	24.0	0.88	25.5	0.94	28.7	1.05	31.7	1.17
	45	16.2	0.63	19.3	0.73	22.5	0.84	24.0	0.89	25.5	0.95	28.7	1.06	31.7	1.19
	50	16.2	0.64	19.3	0.74	22.5	0.85	24.0	0.90	25.5	0.96	28.7	1.08	31.7	1.20
	55	16.2	0.65	19.3	0.75	22.5	0.86	24.0	0.92	25.5	0.98	28.7	1.10	31.7	1.22
	60	16.2	0.67	19.3	0.77	22.5	0.89	24.0	0.95	25.5	1.01	28.7	1.13	31.7	1.27
	65	16.2	0.67	19.3	0.79	22.5	0.90	24.0	0.96	25.5	1.03	28.7	1.15	31.7	1.29
	70	16.2	0.69	19.3	0.80	22.5	0.92	24.0	0.99	25.5	1.05	28.7	1.19	31.7	1.33
	75	16.2	0.70	19.3	0.82	22.5	0.94	24.0	1.01	25.5	1.07	28.7	1.21	31.7	1.36
	80	16.2	0.72	19.3	0.86	22.5	1.01	24.0	1.09	25.5	1.18	28.7	1.35	31.7	1.54
	85	16.2	0.77	19.3	0.91	22.5	1.07	24.0	1.16	25.5	1.25	28.7	1.44	31.7	1.64
	90	16.2	0.86	19.3	1.02	22.5	1.21	24.0	1.30	25.5	1.41	28.7	1.62	31.7	1.86
	95	16.2	0.90	19.3	1.08	22.5	1.28	**24.0**	**1.39**	25.5	1.49	28.7	1.73	31.7	1.98
	100	16.2	0.95	19.3	1.14	22.5	1.35	24.0	1.47	25.5	1.58	28.7	1.83	31.7	2.10
	105	16.2	1.04	19.3	1.26	22.5	1.50	24.0	1.62	25.5	1.75	28.7	2.03	31.7	2.34
	110	16.2	1.15	19.3	1.39	22.5	1.66	24.0	1.80	25.5	1.95	28.7	2.27	31.7	2.61
	115	16.2	1.23	19.3	1.49	22.5	1.78	24.0	1.94	25.5	2.10	28.7	2.45	31.7	2.81
	118	16.2	1.33	19.3	1.62	22.5	1.93	24.0	2.11	25.5	2.29	28.7	2.56	31.7	2.89
	122	16.2	1.47	19.3	1.79	22.5	2.14	24.0	2.34	25.5	2.25	27.0	1.94	26.8	2.20

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM060GSS0

MULTI V™ S WITH LGRED°

Table 32: ZRUM060GSS0 Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-9.9	54.6	1.48	64.8	1.80	75.3	2.13	78.1	2.30	79.2	2.48	82.0	2.84	83.9	2.94
	-5	54.6	1.56	64.8	1.89	75.3	2.25	78.1	2.43	79.2	2.62	82.0	3.00	83.9	3.10
	0	54.6	1.62	64.8	1.97	75.3	2.34	78.1	2.52	79.2	2.72	82.0	3.12	83.9	3.22
	5	54.6	1.68	64.8	2.04	75.3	2.42	78.1	2.62	79.2	2.82	82.0	3.24	83.9	3.34
	10	54.6	1.73	64.8	2.10	75.3	2.49	78.1	2.69	79.2	2.90	82.0	3.33	83.9	3.44
	14	54.6	1.79	64.8	2.18	75.3	2.58	78.1	2.79	79.2	3.01	82.0	3.45	83.9	3.56
	20	54.6	1.83	64.8	2.21	75.3	2.62	78.1	2.83	79.2	3.05	82.0	3.50	83.9	3.61
	25	54.6	1.85	64.8	2.24	75.3	2.65	78.1	2.87	79.2	3.09	82.0	3.54	83.9	3.66
	30	54.6	1.88	64.8	2.27	75.3	2.68	78.1	2.90	79.2	3.12	82.0	3.58	83.9	3.70
	35	54.6	1.90	64.8	2.30	75.3	2.72	78.1	2.93	79.2	3.16	82.0	3.62	83.9	3.74
	40	54.6	1.92	64.8	2.32	75.3	2.75	78.1	2.97	79.2	3.20	82.0	3.66	83.9	3.79
	45	54.6	1.94	64.8	2.35	75.3	2.78	78.1	3.00	79.2	3.23	82.0	3.70	83.9	3.83
	50	54.6	1.96	64.8	2.37	75.3	2.81	78.1	3.03	79.2	3.26	82.0	3.74	83.9	3.87
	55	54.6	1.99	64.8	2.42	75.3	2.86	77.0	3.10	78.1	3.33	80.8	3.80	82.8	3.89
	60	54.6	2.06	64.8	2.50	74.2	2.98	75.3	3.22	76.2	3.46	78.9	3.92	80.8	3.94
	65	54.6	2.10	64.8	2.56	73.1	3.03	74.2	3.28	75.1	3.52	77.8	4.05	79.7	4.08
	70	54.6	2.02	64.8	2.46	71.7	3.02	72.6	3.33	73.7	3.65	76.4	4.05	78.3	4.09
	75	54.6	2.07	64.8	2.62	70.6	3.23	71.5	3.57	72.6	3.91	75.2	4.25	77.2	4.28
	80	54.6	2.36	64.8	2.98	68.7	3.70	69.5	4.08	70.6	4.49	73.3	4.61	75.2	4.65
	85	54.6	2.51	64.8	3.18	67.6	3.95	68.7	4.36	69.5	4.76	72.2	4.80	74.1	4.84
	90	54.6	2.84	63.7	3.62	65.6	4.49	66.5	4.96	67.6	5.14	70.2	5.18	72.2	5.23
	95	55.1	3.01	63.3	3.85	65.2	4.79	**66.3**	**5.30**	67.2	5.32	69.8	5.37	71.8	5.42
	100	55.1	3.26	62.1	4.17	64.1	5.19	65.2	5.58	66.1	5.61	69.0	5.66	71.0	5.71
	105	55.1	3.68	60.5	4.71	62.4	5.86	63.4	5.99	64.4	6.03	66.6	6.08	67.5	6.14
	110	55.1	4.13	58.0	5.31	60.4	6.39	60.6	6.42	61.5	6.44	62.8	6.51	63.0	6.57
	115	54.9	4.78	55.9	6.11	55.9	6.74	55.9	6.74	55.9	6.74	56.7	6.75	56.9	6.76
	118	47.7	4.05	48.6	5.18	48.6	5.67	48.6	5.72	48.6	5.72	49.3	5.73	49.1	5.74
	122	38.1	3.07	39.0	3.94	38.8	4.31	38.9	4.32	39.0	4.33	39.6	4.34	39.6	4.36
120	-9.9	49.7	1.39	59.3	1.69	68.9	2.00	73.8	2.16	77.1	2.33	80.6	2.67	82.3	2.76
	-5	49.7	1.47	59.3	1.78	68.9	2.11	73.8	2.28	77.1	2.46	80.6	2.81	82.3	2.91
	0	49.7	1.53	59.3	1.86	68.9	2.20	73.8	2.37	77.1	2.55	80.6	2.93	82.3	3.03
	5	49.7	1.59	59.3	1.92	68.9	2.28	73.8	2.45	77.1	2.65	80.6	3.03	82.3	3.14
	10	49.7	1.63	59.3	1.98	68.9	2.34	73.8	2.53	77.1	2.72	80.6	3.12	82.3	3.23
	14	49.7	1.69	59.3	2.05	68.9	2.43	73.8	2.62	77.1	2.82	80.6	3.24	82.3	3.34
	20	49.7	1.72	59.3	2.08	68.9	2.46	73.8	2.66	77.1	2.86	80.6	3.28	82.3	3.39
	25	49.7	1.74	59.3	2.11	68.9	2.49	73.8	2.69	77.1	2.90	80.6	3.32	82.3	3.43
	30	49.7	1.76	59.3	2.13	68.9	2.52	73.8	2.72	77.1	2.93	80.6	3.36	82.3	3.47
	35	49.7	1.78	59.3	2.16	68.9	2.55	73.8	2.76	77.1	2.96	80.6	3.40	82.3	3.52
	40	49.7	1.81	59.3	2.18	68.9	2.58	73.8	2.79	77.1	3.00	80.6	3.44	82.3	3.56
	45	49.7	1.83	59.3	2.21	68.9	2.61	73.8	2.83	77.1	3.04	80.6	3.48	82.3	3.60
	50	49.7	1.85	59.3	2.23	68.9	2.64	73.8	2.86	77.1	3.07	80.6	3.52	82.3	3.64
	55	49.7	1.88	59.3	2.27	68.9	2.69	73.8	2.92	76.3	3.13	79.5	3.58	81.4	3.67
	60	49.7	1.94	59.3	2.36	68.9	2.81	73.2	3.03	74.1	3.25	77.5	3.69	79.2	3.76
	65	49.7	1.98	59.3	2.41	68.9	2.86	72.1	3.09	73.2	3.32	76.4	3.81	78.3	3.85
	70	49.7	1.94	59.3	2.36	68.9	2.90	70.8	3.19	71.6	3.50	75.0	3.89	76.7	3.93
	75	49.7	1.99	59.3	2.51	68.9	3.11	69.7	3.43	70.8	3.76	73.9	4.08	75.8	4.11
	80	49.7	2.26	59.3	2.86	66.9	3.55	67.8	3.92	68.6	4.31	71.9	4.43	73.6	4.46
	85	49.7	2.41	59.3	3.06	65.8	3.79	66.7	4.18	67.8	4.57	70.8	4.61	72.7	4.65
	90	49.7	2.73	59.3	3.47	63.9	4.31	64.7	4.77	65.6	4.93	68.8	4.97	70.5	5.02
	95	50.2	2.89	59.9	3.70	63.5	4.60	**64.3**	**5.09**	65.4	5.10	68.4	5.15	70.4	5.20
	100	50.2	3.13	59.9	4.00	62.4	4.99	63.5	5.35	64.3	5.38	67.6	5.43	69.3	5.48
	105	50.2	3.53	58.9	4.53	60.7	5.63	61.7	5.75	62.5	5.79	65.6	5.84	66.7	5.89
	110	50.2	3.96	57.4	5.10	59.3	6.14	59.5	6.17	60.3	6.19	62.2	6.25	62.5	6.31
	115	48.8	4.58	55.3	5.86	55.3	6.47	55.3	6.47	55.3	6.47	56.7	6.48	56.9	6.49
	118	43.6	4.05	48.1	4.97	48.2	5.44	48.2	5.49	48.2	5.49	49.3	5.50	49.1	5.51
	122	34.8	3.07	38.6	3.78	38.4	4.14	38.5	4.15	38.6	4.15	39.6	4.17	39.6	4.18

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM060GSS0

Table 33: ZRUM060GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
110	-9.9	46.0	1.28	54.9	1.55	63.8	1.84	68.2	1.99	72.6	2.13	80.0	2.43	81.7	2.52
	-5	46.0	1.35	54.9	1.63	63.8	1.94	68.2	2.10	72.6	2.25	80.0	2.57	81.7	2.66
	0	46.0	1.41	54.9	1.70	63.8	2.01	68.2	2.18	72.6	2.34	80.0	2.67	81.7	2.77
	5	46.0	1.46	54.9	1.76	63.8	2.09	68.2	2.26	72.6	2.43	80.0	2.77	81.7	2.87
	10	46.0	1.50	54.9	1.81	63.8	2.15	68.2	2.33	72.6	2.49	80.0	2.85	81.7	2.95
	14	46.0	1.56	54.9	1.88	63.8	2.23	68.2	2.41	72.6	2.59	80.0	2.95	81.7	3.06
	20	46.0	1.58	54.9	1.91	63.8	2.26	68.2	2.45	72.6	2.62	80.0	3.00	81.7	3.11
	25	46.0	1.60	54.9	1.93	63.8	2.29	68.2	2.47	72.6	2.66	80.0	3.04	81.7	3.15
	30	46.0	1.62	54.9	1.96	63.8	2.31	68.2	2.50	72.6	2.69	80.0	3.08	81.7	3.19
	35	46.0	1.64	54.9	1.99	63.8	2.35	68.2	2.54	72.6	2.73	80.0	3.13	81.7	3.24
	40	46.0	1.66	54.9	2.01	63.8	2.38	68.2	2.57	72.6	2.77	80.0	3.17	81.7	3.28
	45	46.0	1.69	54.9	2.04	63.8	2.42	68.2	2.62	72.6	2.81	80.0	3.22	81.7	3.33
	50	46.0	1.72	54.9	2.08	63.8	2.46	68.2	2.66	72.6	2.86	80.0	3.28	81.7	3.39
	55	46.0	1.75	54.9	2.12	63.8	2.51	68.2	2.72	72.6	2.92	78.9	3.33	80.6	3.42
	60	46.0	1.80	54.9	2.19	63.8	2.61	68.2	2.82	72.6	3.03	76.9	3.44	78.6	3.47
	65	46.0	1.84	54.9	2.24	63.8	2.66	68.2	2.88	72.6	3.09	75.8	3.55	77.5	3.58
	70	46.0	1.86	54.9	2.26	63.8	2.78	68.2	3.06	71.2	3.36	74.4	3.73	76.1	3.77
	75	46.0	1.91	54.9	2.41	63.8	2.98	68.2	3.28	70.1	3.60	73.2	3.91	74.9	3.94
	80	45.5	2.17	54.3	2.75	63.1	3.41	66.7	3.76	67.5	4.13	70.5	4.24	72.2	4.28
	85	45.5	2.31	54.3	2.93	63.1	3.64	65.6	4.01	66.4	4.38	69.4	4.42	71.1	4.46
	90	45.5	2.61	54.3	3.33	62.8	4.13	63.7	4.57	64.5	4.73	67.4	4.76	69.1	4.81
	95	45.5	2.77	54.3	3.55	61.7	4.41	**62.6**	**4.88**	63.4	4.89	66.3	4.94	68.0	4.99
	100	45.5	3.00	54.3	3.83	60.9	4.78	61.7	5.13	62.6	5.16	65.5	5.21	67.2	5.26
	105	45.5	3.38	54.3	4.34	59.0	5.40	59.8	5.52	60.6	5.55	63.6	5.60	65.2	5.65
	110	45.5	3.80	54.3	4.89	57.2	5.88	57.4	5.91	58.2	5.93	60.0	5.99	60.2	6.05
	115	45.5	4.40	54.3	5.62	54.8	6.20	54.8	6.20	55.0	6.20	56.1	6.21	56.4	6.22
	118	44.0	4.01	47.2	4.76	47.7	5.21	47.7	5.26	47.9	5.26	48.8	5.27	48.6	5.28
	122	35.2	3.04	37.9	3.62	38.0	3.97	38.1	3.98	38.4	3.98	39.2	4.00	39.2	4.01
100	-9.9	40.4	1.13	48.2	1.36	56.0	1.61	60.0	1.76	65.9	1.90	73.9	2.20	78.1	2.29
	-5	40.4	1.19	48.2	1.44	56.0	1.70	60.0	1.86	65.9	2.01	73.9	2.32	78.1	2.41
	0	40.4	1.24	48.2	1.50	56.0	1.77	60.0	1.93	65.9	2.09	73.9	2.41	78.1	2.51
	5	40.4	1.28	48.2	1.55	56.0	1.84	60.0	2.00	65.9	2.17	73.9	2.50	78.1	2.60
	10	40.4	1.32	48.2	1.59	56.0	1.89	60.0	2.06	65.9	2.23	73.9	2.57	78.1	2.68
	14	40.4	1.37	48.2	1.65	56.0	1.96	60.0	2.13	65.9	2.31	73.9	2.66	78.1	2.77
	20	40.4	1.41	48.2	1.71	56.0	2.02	60.0	2.19	65.9	2.38	73.9	2.74	78.1	2.85
	25	40.4	1.45	48.2	1.75	56.0	2.07	60.0	2.25	65.9	2.44	73.9	2.81	78.1	2.92
	30	40.4	1.48	48.2	1.80	56.0	2.12	60.0	2.30	65.9	2.51	73.9	2.87	78.1	2.99
	35	40.4	1.51	48.2	1.82	56.0	2.16	60.0	2.33	65.9	2.55	73.9	2.92	78.1	3.04
	40	40.4	1.53	48.2	1.85	56.0	2.19	60.0	2.37	65.9	2.59	73.9	2.96	78.1	3.08
	45	40.4	1.57	48.2	1.89	56.0	2.24	60.0	2.42	65.9	2.64	73.9	3.03	78.1	3.15
	50	40.4	1.60	48.2	1.93	56.0	2.28	60.0	2.47	65.9	2.69	73.9	3.09	78.1	3.21
	55	40.4	1.62	48.2	1.97	56.0	2.33	60.0	2.52	65.9	2.75	73.9	3.14	77.3	3.26
	60	40.4	1.68	48.2	2.04	56.0	2.42	60.0	2.62	65.9	2.85	73.7	3.24	75.0	3.32
	65	40.4	1.71	48.2	2.08	56.0	2.47	60.0	2.67	65.9	2.91	72.6	3.35	74.2	3.41
	70	40.4	1.76	48.2	2.14	56.0	2.64	60.0	2.90	65.9	3.23	71.2	3.59	72.6	3.65
	75	40.4	1.81	48.2	2.28	56.0	2.82	60.0	3.11	65.9	3.46	70.1	3.76	71.7	3.80
	80	40.4	2.05	48.2	2.60	56.0	3.23	60.0	3.56	65.9	3.97	68.1	4.08	69.5	4.14
	85	40.4	2.19	48.2	2.78	56.0	3.45	60.0	3.80	65.7	4.22	67.0	4.25	68.7	4.31
	90	40.4	2.48	48.2	3.16	56.0	3.91	60.0	4.33	63.5	4.55	65.1	4.58	66.5	4.65
	95	40.4	2.63	48.2	3.36	56.0	4.18	**60.0**	**4.62**	62.6	4.71	64.0	4.75	65.7	4.82
	100	40.4	2.84	48.2	3.62	56.0	4.52	58.9	4.85	61.6	4.95	63.2	5.00	64.6	5.07
	105	40.4	3.19	48.2	4.08	55.7	5.08	57.3	5.20	59.7	5.30	61.3	5.35	62.8	5.42
	110	40.4	3.56	48.2	4.59	55.0	5.52	56.3	5.54	57.4	5.65	58.3	5.70	59.4	5.78
	115	40.4	4.09	48.2	5.24	52.4	5.78	54.0	5.78	55.4	5.86	55.9	5.87	56.1	5.91
	118	40.4	4.13	42.3	4.91	45.6	4.86	47.0	4.90	48.2	4.97	48.6	4.98	48.4	5.02
	122	34.6	3.74	33.9	3.74	36.3	3.70	37.6	3.71	38.6	3.77	39.1	3.78	39.0	3.81

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM060GSS0

MULTI V™ S WITH LGRED°

Table 34: ZRUM060GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
90	-9.9	36.4	1.01	43.4	1.21	50.6	1.43	54.1	1.53	57.6	1.64	64.6	1.89	71.5	2.07
	-5	36.4	1.06	43.4	1.27	50.6	1.50	54.1	1.62	57.6	1.73	64.6	1.99	71.5	2.19
	0	36.4	1.11	43.4	1.33	50.6	1.56	54.1	1.68	57.6	1.80	64.6	2.07	71.5	2.27
	5	36.4	1.15	43.4	1.37	50.6	1.62	54.1	1.74	57.6	1.86	64.6	2.15	71.5	2.36
	10	36.4	1.18	43.4	1.41	50.6	1.67	54.1	1.79	57.6	1.92	64.6	2.21	71.5	2.42
	14	36.4	1.22	43.4	1.46	50.6	1.73	54.1	1.86	57.6	1.99	64.6	2.29	71.5	2.51
	20	36.4	1.27	43.4	1.52	50.6	1.79	54.1	1.93	57.6	2.07	64.6	2.37	71.5	2.61
	25	36.4	1.30	43.4	1.57	50.6	1.85	54.1	1.99	57.6	2.14	64.6	2.44	71.5	2.69
	30	36.4	1.34	43.4	1.61	50.6	1.90	54.1	2.05	57.6	2.21	64.6	2.51	71.5	2.77
	35	36.4	1.38	43.4	1.66	50.6	1.96	54.1	2.11	57.6	2.27	64.6	2.58	71.5	2.86
	40	36.4	1.42	43.4	1.71	50.6	2.02	54.1	2.18	57.6	2.34	64.6	2.66	71.5	2.94
	45	36.4	1.46	43.4	1.75	50.6	2.07	54.1	2.23	57.6	2.40	64.6	2.72	71.5	3.01
	50	36.4	1.49	43.4	1.79	50.6	2.11	54.1	2.28	57.6	2.45	64.6	2.78	71.5	3.07
	55	36.4	1.51	43.4	1.82	50.6	2.15	54.1	2.32	57.6	2.50	64.6	2.84	71.5	3.10
	60	36.4	1.56	43.4	1.89	50.6	2.23	54.1	2.41	57.6	2.60	64.6	2.95	70.9	3.14
	65	36.4	1.59	43.4	1.93	50.6	2.28	54.1	2.46	57.6	2.64	64.6	3.00	70.4	3.29
	70	36.4	1.63	43.4	1.98	50.6	2.36	54.1	2.60	57.6	2.84	64.6	3.35	69.1	3.54
	75	36.4	1.66	43.4	2.07	50.6	2.52	54.1	2.78	57.6	3.05	64.6	3.49	68.0	3.70
	80	36.4	1.86	43.4	2.35	50.6	2.88	54.1	3.18	57.6	3.48	64.6	3.86	66.2	4.02
	85	36.4	1.98	43.4	2.51	50.6	3.08	54.1	3.39	57.6	3.72	63.8	4.07	65.1	4.19
	90	36.4	2.24	43.4	2.84	50.6	3.50	54.1	3.85	57.6	4.23	61.9	4.45	63.2	4.52
	95	36.4	2.39	43.4	3.01	50.6	3.73	**54.1**	**4.11**	57.6	4.52	60.8	4.62	62.1	4.68
	100	36.4	2.46	43.4	3.14	50.6	3.88	54.1	4.27	57.6	4.62	60.0	4.82	61.1	4.87
	105	36.4	2.86	43.4	3.64	50.6	4.39	54.1	4.68	56.9	4.95	58.1	5.17	58.9	5.23
	110	36.4	3.28	43.4	4.20	50.6	4.81	54.1	5.05	54.6	5.37	55.4	5.55	55.8	5.61
	115	36.4	3.55	43.4	4.55	47.4	5.07	51.3	5.29	52.0	5.54	52.5	5.66	52.7	5.73
	118	36.4	3.77	42.3	4.91	41.3	4.26	44.7	4.49	45.3	4.70	45.7	4.80	45.5	4.86
	122	34.6	3.74	33.9	3.74	32.9	3.25	35.7	3.39	36.3	3.56	36.7	3.64	36.7	3.69
80	-9.9	32.4	0.87	38.6	1.05	45.0	1.22	47.9	1.33	51.2	1.43	57.3	1.63	63.5	1.82
	-5	32.4	0.92	38.6	1.11	45.0	1.29	47.9	1.40	51.2	1.51	57.3	1.72	63.5	1.92
	0	32.4	0.96	38.6	1.15	45.0	1.34	47.9	1.46	51.2	1.57	57.3	1.79	63.5	2.00
	5	32.4	0.99	38.6	1.20	45.0	1.39	47.9	1.51	51.2	1.63	57.3	1.86	63.5	2.07
	10	32.4	1.02	38.6	1.23	45.0	1.43	47.9	1.55	51.2	1.67	57.3	1.91	63.5	2.13
	14	32.4	1.06	38.6	1.27	45.0	1.48	47.9	1.61	51.2	1.73	57.3	1.98	63.5	2.21
	20	32.4	1.10	38.6	1.32	45.0	1.54	47.9	1.67	51.2	1.79	57.3	2.05	63.5	2.29
	25	32.4	1.13	38.6	1.36	45.0	1.59	47.9	1.72	51.2	1.84	57.3	2.11	63.5	2.36
	30	32.4	1.17	38.6	1.40	45.0	1.64	47.9	1.77	51.2	1.89	57.3	2.17	63.5	2.43
	35	32.4	1.20	38.6	1.44	45.0	1.69	47.9	1.82	51.2	1.95	57.3	2.23	63.5	2.50
	40	32.4	1.23	38.6	1.47	45.0	1.73	47.9	1.87	51.2	2.00	57.3	2.29	63.5	2.57
	45	32.4	1.25	38.6	1.49	45.0	1.76	47.9	1.89	51.2	2.02	57.3	2.32	63.5	2.60
	50	32.4	1.26	38.6	1.51	45.0	1.78	47.9	1.92	51.2	2.05	57.3	2.35	63.5	2.64
	55	32.4	1.28	38.6	1.54	45.0	1.81	47.9	1.95	51.2	2.09	57.3	2.40	63.5	2.68
	60	32.4	1.33	38.6	1.59	45.0	1.87	47.9	2.02	51.2	2.18	57.3	2.48	63.5	2.79
	65	32.4	1.35	38.6	1.62	45.0	1.91	47.9	2.06	51.2	2.22	57.3	2.53	63.5	2.86
	70	32.4	1.39	38.6	1.67	45.0	1.97	47.9	2.12	51.2	2.31	57.3	2.73	63.5	3.16
	75	32.4	1.41	38.6	1.70	45.0	2.07	47.9	2.27	51.2	2.46	57.3	2.90	63.5	3.33
	80	32.4	1.55	38.6	1.93	45.0	2.35	47.9	2.57	51.2	2.81	57.3	3.34	63.5	3.72
	85	32.4	1.65	38.6	2.05	45.0	2.51	47.9	2.75	51.2	3.01	57.3	3.55	63.5	3.82
	90	32.4	1.85	38.6	2.33	45.0	2.84	47.9	3.12	51.2	3.42	57.3	3.91	62.4	4.04
	95	32.4	1.97	38.6	2.46	45.0	3.03	**47.9**	**3.31**	51.2	3.64	57.3	4.04	61.1	4.15
	100	32.4	2.12	38.6	2.66	45.0	3.27	47.9	3.55	51.2	3.78	57.3	4.21	59.7	4.29
	105	32.4	2.42	38.6	3.04	45.0	3.64	47.9	3.81	51.2	4.06	56.6	4.38	58.0	4.50
	110	32.4	2.75	38.6	3.47	45.0	3.86	47.9	4.07	51.2	4.37	54.6	4.54	54.9	4.73
	115	32.4	2.94	38.6	3.70	45.0	3.99	47.9	4.27	47.9	4.47	48.2	4.64	48.2	4.92
	118	32.4	3.12	38.6	3.94	41.3	4.26	42.1	4.06	41.7	3.79	42.0	3.94	41.6	4.17
	122	32.4	3.37	34.0	3.71	32.9	3.25	33.6	3.07	33.4	2.87	33.7	2.98	33.5	3.17

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM060GSS0

Table 35: ZRUM060GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-9.9	28.4	0.77	33.8	0.92	39.4	1.08	42.1	1.15	44.7	1.23	50.1	1.41	55.7	1.58
	-5	28.4	0.81	33.8	0.97	39.4	1.14	42.1	1.22	44.7	1.30	50.1	1.49	55.7	1.66
	0	28.4	0.85	33.8	1.00	39.4	1.18	42.1	1.27	44.7	1.35	50.1	1.54	55.7	1.73
	5	28.4	0.88	33.8	1.04	39.4	1.23	42.1	1.31	44.7	1.40	50.1	1.60	55.7	1.79
	10	28.4	0.90	33.8	1.07	39.4	1.26	42.1	1.35	44.7	1.44	50.1	1.65	55.7	1.84
	14	28.4	0.93	33.8	1.11	39.4	1.31	42.1	1.40	44.7	1.49	50.1	1.71	55.7	1.91
	20	28.4	0.97	33.8	1.15	39.4	1.35	42.1	1.44	44.7	1.54	50.1	1.76	55.7	1.97
	25	28.4	0.99	33.8	1.18	39.4	1.38	42.1	1.48	44.7	1.58	50.1	1.81	55.7	2.03
	30	28.4	1.02	33.8	1.21	39.4	1.42	42.1	1.52	44.7	1.63	50.1	1.85	55.7	2.08
	35	28.4	1.05	33.8	1.24	39.4	1.46	42.1	1.56	44.7	1.67	50.1	1.90	55.7	2.14
	40	28.4	1.07	33.8	1.27	39.4	1.49	42.1	1.60	44.7	1.71	50.1	1.95	55.7	2.19
	45	28.4	1.09	33.8	1.29	39.4	1.52	42.1	1.63	44.7	1.74	50.1	1.98	55.7	2.23
	50	28.4	1.11	33.8	1.32	39.4	1.54	42.1	1.66	44.7	1.77	50.1	2.01	55.7	2.27
	55	28.4	1.13	33.8	1.34	39.4	1.57	42.1	1.68	44.7	1.80	50.1	2.05	55.7	2.31
	60	28.4	1.16	33.8	1.39	39.4	1.62	42.1	1.75	44.7	1.87	50.1	2.13	55.7	2.40
	65	28.4	1.18	33.8	1.41	39.4	1.65	42.1	1.78	44.7	1.91	50.1	2.17	55.7	2.44
	70	28.4	1.21	33.8	1.45	39.4	1.70	42.1	1.83	44.7	1.96	50.1	2.25	55.7	2.59
	75	28.4	1.23	33.8	1.48	39.4	1.73	42.1	1.89	44.7	2.05	50.1	2.40	55.7	2.75
	80	28.4	1.33	33.8	1.63	39.4	1.97	42.1	2.15	44.7	2.33	50.1	2.65	55.7	3.04
	85	28.4	1.41	33.8	1.73	39.4	2.10	42.1	2.29	44.7	2.51	50.1	2.83	55.7	3.17
	90	28.4	1.58	33.8	1.96	39.4	2.37	42.1	2.59	44.7	2.84	50.1	3.15	55.7	3.44
	95	28.4	1.67	33.8	2.08	39.4	2.53	**42.1**	**2.77**	44.7	3.01	50.1	3.31	55.7	3.55
	100	28.4	1.81	33.8	2.25	39.4	2.73	42.1	2.98	44.7	3.10	50.1	3.47	55.7	3.65
	105	28.4	2.05	33.8	2.56	39.4	3.01	42.1	3.18	44.7	3.37	50.1	3.65	55.7	3.86
	110	28.4	2.31	33.8	2.90	39.4	3.18	42.1	3.38	44.7	3.65	50.1	3.81	54.1	4.15
	115	28.4	2.48	33.8	3.09	39.4	3.29	42.1	3.57	44.7	3.76	50.1	3.92	51.0	4.42
	118	28.4	2.64	33.8	3.29	39.4	3.50	42.1	3.78	40.7	3.76	42.0	3.33	41.6	3.75
	122	28.4	2.84	33.8	3.56	35.1	3.34	33.6	3.11	32.6	2.85	33.7	2.52	33.5	2.85
60	-9.9	24.4	0.67	28.9	0.78	33.8	0.91	35.9	0.97	38.3	1.05	43.1	1.19	47.7	1.32
	-5	24.4	0.70	28.9	0.82	33.8	0.96	35.9	1.03	38.3	1.10	43.1	1.25	47.7	1.40
	0	24.4	0.73	28.9	0.85	33.8	1.00	35.9	1.07	38.3	1.15	43.1	1.30	47.7	1.45
	5	24.4	0.76	28.9	0.88	33.8	1.03	35.9	1.11	38.3	1.19	43.1	1.35	47.7	1.51
	10	24.4	0.78	28.9	0.91	33.8	1.06	35.9	1.14	38.3	1.23	43.1	1.39	47.7	1.55
	14	24.4	0.81	28.9	0.94	33.8	1.10	35.9	1.18	38.3	1.27	43.1	1.44	47.7	1.61
	20	24.4	0.83	28.9	0.97	33.8	1.14	35.9	1.22	38.3	1.31	43.1	1.48	47.7	1.66
	25	24.4	0.85	28.9	1.00	33.8	1.17	35.9	1.25	38.3	1.34	43.1	1.52	47.7	1.71
	30	24.4	0.88	28.9	1.03	33.8	1.20	35.9	1.29	38.3	1.38	43.1	1.56	47.7	1.76
	35	24.4	0.90	28.9	1.06	33.8	1.23	35.9	1.32	38.3	1.41	43.1	1.60	47.7	1.80
	40	24.4	0.92	28.9	1.08	33.8	1.26	35.9	1.36	38.3	1.45	43.1	1.65	47.7	1.85
	45	24.4	0.93	28.9	1.09	33.8	1.27	35.9	1.37	38.3	1.46	43.1	1.66	47.7	1.86
	50	24.4	0.94	28.9	1.10	33.8	1.28	35.9	1.38	38.3	1.48	43.1	1.67	47.7	1.88
	55	24.4	0.95	28.9	1.12	33.8	1.31	35.9	1.41	38.3	1.50	43.1	1.71	47.7	1.91
	60	24.4	0.98	28.9	1.16	33.8	1.35	35.9	1.46	38.3	1.56	43.1	1.76	47.7	1.99
	65	24.4	0.99	28.9	1.18	33.8	1.38	35.9	1.48	38.3	1.58	43.1	1.80	47.7	2.03
	70	24.4	1.02	28.9	1.21	33.8	1.42	35.9	1.52	38.3	1.63	43.1	1.85	47.7	2.10
	75	24.4	1.04	28.9	1.23	33.8	1.44	35.9	1.55	38.3	1.68	43.1	1.96	47.7	2.24
	80	24.4	1.10	28.9	1.35	33.8	1.62	35.9	1.76	38.3	1.91	43.1	2.20	47.7	2.53
	85	24.4	1.17	28.9	1.43	33.8	1.72	35.9	1.88	38.3	2.05	43.1	2.32	47.7	2.61
	90	24.4	1.32	28.9	1.62	33.8	1.94	35.9	2.12	38.3	2.30	43.1	2.59	47.7	2.85
	95	24.4	1.39	28.9	1.71	33.8	2.07	**35.9**	**2.27**	38.3	2.43	43.1	2.71	47.7	3.00
	100	24.4	1.50	28.9	1.84	33.8	2.23	35.9	2.44	38.3	2.54	43.1	2.87	47.7	3.13
	105	24.4	1.70	28.9	2.10	33.8	2.46	35.9	2.60	38.3	2.77	43.1	3.05	47.7	3.41
	110	24.4	1.91	28.9	2.38	33.8	2.65	35.9	2.76	38.3	2.99	43.1	3.26	47.7	3.72
	115	24.4	2.05	28.9	2.54	33.8	2.76	35.9	2.92	38.3	3.10	43.1	3.45	47.7	3.98
	118	24.4	2.17	28.9	2.69	33.8	2.93	35.9	3.10	38.3	3.30	42.0	3.33	41.6	3.75
	122	24.4	2.34	28.9	2.91	33.8	3.17	33.5	3.15	32.4	2.91	33.7	2.52	33.5	2.85

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

COOLING CAPACITY

ZRUM060GSS0

MULTI V™ S WITH LGRED°

Table 36: ZRUM060GSS0 Cooling Capacities, continued.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
50	-9.9	20.3	0.57	24.1	0.68	28.1	0.76	30.0	0.81	31.9	0.88	35.9	0.97	39.6	1.08
	-5	20.3	0.61	24.1	0.71	28.1	0.80	30.0	0.86	31.9	0.93	35.9	1.03	39.6	1.14
	0	20.3	0.63	24.1	0.74	28.1	0.83	30.0	0.89	31.9	0.96	35.9	1.07	39.6	1.18
	5	20.3	0.65	24.1	0.77	28.1	0.86	30.0	0.93	31.9	1.00	35.9	1.11	39.6	1.23
	10	20.3	0.67	24.1	0.79	28.1	0.88	30.0	0.95	31.9	1.03	35.9	1.14	39.6	1.26
	14	20.3	0.70	24.1	0.82	28.1	0.92	30.0	0.99	31.9	1.06	35.9	1.18	39.6	1.31
	20	20.3	0.72	24.1	0.84	28.1	0.95	30.0	1.02	31.9	1.10	35.9	1.22	39.6	1.36
	25	20.3	0.74	24.1	0.87	28.1	0.99	30.0	1.05	31.9	1.13	35.9	1.26	39.6	1.40
	30	20.3	0.77	24.1	0.89	28.1	1.02	30.0	1.08	31.9	1.16	35.9	1.29	39.6	1.44
	35	20.3	0.79	24.1	0.91	28.1	1.04	30.0	1.11	31.9	1.19	35.9	1.33	39.6	1.48
	40	20.3	0.81	24.1	0.93	28.1	1.07	30.0	1.14	31.9	1.22	35.9	1.36	39.6	1.52
	45	20.3	0.82	24.1	0.95	28.1	1.09	30.0	1.16	31.9	1.23	35.9	1.38	39.6	1.54
	50	20.3	0.83	24.1	0.96	28.1	1.10	30.0	1.17	31.9	1.25	35.9	1.40	39.6	1.56
	55	20.3	0.85	24.1	0.98	28.1	1.12	30.0	1.19	31.9	1.27	35.9	1.43	39.6	1.59
	60	20.3	0.86	24.1	1.01	28.1	1.16	30.0	1.23	31.9	1.31	35.9	1.47	39.6	1.65
	65	20.3	0.87	24.1	1.02	28.1	1.17	30.0	1.25	31.9	1.33	35.9	1.50	39.6	1.68
	70	20.3	0.90	24.1	1.04	28.1	1.20	30.0	1.29	31.9	1.37	35.9	1.54	39.6	1.73
	75	20.3	0.91	24.1	1.06	28.1	1.23	30.0	1.30	31.9	1.39	35.9	1.57	39.6	1.76
	80	20.3	0.93	24.1	1.12	28.1	1.31	30.0	1.42	31.9	1.53	35.9	1.75	39.6	2.00
	85	20.3	1.00	24.1	1.18	28.1	1.39	30.0	1.51	31.9	1.62	35.9	1.87	39.6	2.13
	90	20.3	1.11	24.1	1.32	28.1	1.57	30.0	1.69	31.9	1.83	35.9	2.11	39.6	2.42
	95	20.3	1.17	24.1	1.40	28.1	1.66	**30.0**	**1.80**	31.9	1.94	35.9	2.24	39.6	2.57
	100	20.3	1.23	24.1	1.48	28.1	1.75	30.0	1.90	31.9	2.05	35.9	2.38	39.6	2.72
	105	20.3	1.35	24.1	1.64	28.1	1.94	30.0	2.10	31.9	2.27	35.9	2.64	39.6	3.03
	110	20.3	1.49	24.1	1.81	28.1	2.15	30.0	2.34	31.9	2.53	35.9	2.94	39.6	3.39
	115	20.3	1.60	24.1	1.94	28.1	2.31	30.0	2.51	31.9	2.72	35.9	3.17	39.6	3.65
	118	20.3	1.72	24.1	2.10	28.1	2.51	30.0	2.73	31.9	2.97	35.9	3.33	39.6	3.75
	122	20.3	1.90	24.1	2.33	28.1	2.78	30.0	3.03	31.9	2.91	33.7	2.52	33.5	2.85

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

ZRUN024GSS0

Table 37: ZRUN024GSS0 Maximum Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100%	-9.9	17.9	0.45	21.3	0.55	24.7	0.65	26.5	0.71	29.1	0.77	32.7	0.88	34.5	0.92
	-4	17.9	0.48	21.3	0.58	24.7	0.69	26.5	0.75	29.1	0.81	32.7	0.93	34.5	0.97
	0	17.9	0.50	21.3	0.60	24.7	0.71	26.5	0.78	29.1	0.84	32.7	0.97	34.5	1.01
	5	17.9	0.52	21.3	0.62	24.7	0.74	26.5	0.81	29.1	0.87	32.7	1.01	34.5	1.05
	10	17.9	0.53	21.3	0.64	24.7	0.76	26.5	0.83	29.1	0.90	32.7	1.04	34.5	1.08
	14	17.9	0.55	21.3	0.67	24.7	0.79	26.5	0.86	29.1	0.93	32.7	1.07	34.5	1.12
	20	17.9	0.57	21.3	0.69	24.7	0.81	26.5	0.88	29.1	0.96	32.7	1.10	34.5	1.15
	25	17.9	0.58	21.3	0.70	24.7	0.83	26.5	0.90	29.1	0.98	32.7	1.13	34.5	1.18
	30	17.9	0.60	21.3	0.72	24.7	0.85	26.5	0.92	29.1	1.01	32.7	1.16	34.5	1.20
	35	17.9	0.61	21.3	0.73	24.7	0.87	26.5	0.94	29.1	1.02	32.7	1.18	34.5	1.22
	40	17.9	0.62	21.3	0.75	24.7	0.88	26.5	0.95	29.1	1.04	32.7	1.19	34.5	1.24
	45	17.9	0.63	21.3	0.76	24.7	0.90	26.5	0.97	29.1	1.06	32.7	1.22	34.5	1.27
	50	17.9	0.64	21.3	0.78	24.7	0.92	26.5	0.99	29.1	1.08	32.7	1.24	34.5	1.29
	55	17.9	0.65	21.3	0.79	24.7	0.94	26.5	1.02	29.1	1.11	32.7	1.26	34.1	1.31
	60	17.9	0.67	21.3	0.82	24.7	0.98	26.5	1.05	29.1	1.15	32.5	1.30	33.1	1.34
	65	17.9	0.69	21.3	0.84	24.7	0.99	26.5	1.08	29.1	1.17	32.0	1.35	32.8	1.37
	70	17.9	0.71	21.3	0.86	24.7	1.06	26.5	1.17	29.1	1.30	31.4	1.44	32.0	1.47
	75	17.9	0.73	21.3	0.92	24.7	1.14	26.5	1.25	29.1	1.39	31.0	1.51	31.7	1.53
	80	17.9	0.83	21.3	1.05	24.7	1.30	26.5	1.43	29.1	1.60	30.1	1.64	30.7	1.67
	85	17.9	0.88	21.3	1.12	24.7	1.39	26.5	1.53	29.0	1.70	29.6	1.71	30.3	1.73
	90	17.9	1.00	21.3	1.27	24.7	1.58	26.5	1.74	28.0	1.83	28.8	1.84	29.4	1.87
	95	17.9	1.06	21.3	1.35	24.7	1.68	**26.5**	**1.86**	27.7	1.90	28.3	1.91	29.0	1.94
	100	17.9	1.14	21.3	1.46	24.7	1.82	26.0	1.95	27.2	1.99	27.9	2.01	28.5	2.04
	105	17.9	1.28	21.3	1.64	24.6	2.05	25.3	2.09	26.4	2.14	27.1	2.15	27.7	2.18
	110	17.9	1.43	21.3	1.85	24.3	2.22	24.9	2.23	25.4	2.27	25.8	2.30	26.2	2.33
	115	17.9	1.65	21.3	2.11	23.1	2.33	23.9	2.33	24.4	2.36	24.7	2.36	24.8	2.38
	118	17.9	1.66	18.7	1.98	20.1	1.96	20.8	1.97	21.3	2.00	21.5	2.01	21.4	2.02
	122	15.3	1.51	15.0	1.50	16.1	1.49	16.6	1.49	17.0	1.52	17.3	1.52	17.2	1.53

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

ZRUM036GSS0

MULTI V™ S WITH LGRED°

Table 38: ZRUM036GSS0 Maximum Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100%	-9.9	26.2	0.63	31.3	0.76	36.3	0.90	38.9	0.98	42.8	1.06	47.9	1.23	50.6	1.28
	-4	26.2	0.66	31.3	0.80	36.3	0.95	38.9	1.04	42.8	1.12	47.9	1.29	50.6	1.35
	0	26.2	0.69	31.3	0.83	36.3	0.99	38.9	1.08	42.8	1.17	47.9	1.35	50.6	1.40
	5	26.2	0.72	31.3	0.86	36.3	1.03	38.9	1.12	42.8	1.21	47.9	1.39	50.6	1.45
	10	26.2	0.74	31.3	0.89	36.3	1.05	38.9	1.15	42.8	1.24	47.9	1.43	50.6	1.49
	14	26.2	0.76	31.3	0.92	36.3	1.09	38.9	1.19	42.8	1.29	47.9	1.49	50.6	1.55
	20	26.2	0.79	31.3	0.95	36.3	1.13	38.9	1.22	42.8	1.33	47.9	1.53	50.6	1.59
	25	26.2	0.81	31.3	0.98	36.3	1.16	38.9	1.25	42.8	1.36	47.9	1.57	50.6	1.63
	30	26.2	0.83	31.3	1.00	36.3	1.19	38.9	1.28	42.8	1.40	47.9	1.60	50.6	1.67
	35	26.2	0.84	31.3	1.02	36.3	1.20	38.9	1.30	42.8	1.42	47.9	1.63	50.6	1.69
	40	26.2	0.85	31.3	1.03	36.3	1.22	38.9	1.32	42.8	1.44	47.9	1.65	50.6	1.72
	45	26.2	0.87	31.3	1.06	36.3	1.25	38.9	1.35	42.8	1.47	47.9	1.69	50.6	1.76
	50	26.2	0.89	31.3	1.08	36.3	1.27	38.9	1.38	42.8	1.50	47.9	1.72	50.6	1.79
	55	26.2	0.91	31.3	1.10	36.3	1.30	38.9	1.41	42.8	1.53	47.9	1.75	50.1	1.82
	60	26.2	0.93	31.3	1.14	36.3	1.35	38.9	1.46	42.8	1.59	47.8	1.81	48.7	1.85
	65	26.2	0.95	31.3	1.16	36.3	1.38	38.9	1.49	42.8	1.62	47.0	1.87	48.1	1.90
	70	26.2	0.98	31.3	1.20	36.3	1.47	38.9	1.62	42.8	1.80	46.1	2.00	47.0	2.04
	75	26.2	1.01	31.3	1.27	36.3	1.57	38.9	1.74	42.8	1.93	45.4	2.10	46.5	2.12
	80	26.2	1.15	31.3	1.45	36.3	1.80	38.9	1.99	42.8	2.22	44.2	2.28	45.1	2.31
	85	26.2	1.22	31.3	1.55	36.3	1.92	38.9	2.12	42.6	2.35	43.5	2.37	44.5	2.40
	90	26.2	1.38	31.3	1.76	36.3	2.18	38.9	2.42	41.1	2.54	42.2	2.56	43.1	2.59
	95	26.2	1.47	31.3	1.87	36.3	2.33	**38.9**	**2.58**	40.6	2.63	41.5	2.65	42.6	2.69
	100	26.2	1.58	31.3	2.02	36.3	2.52	38.2	2.71	39.9	2.76	41.0	2.79	41.9	2.83
	105	26.2	1.78	31.3	2.28	36.1	2.84	37.1	2.90	38.7	2.96	39.7	2.99	40.7	3.03
	110	26.2	1.99	31.3	2.56	35.7	3.08	36.5	3.09	37.2	3.15	37.8	3.18	38.5	3.23
	115	26.2	2.28	31.3	2.92	34.0	3.22	35.0	3.22	35.9	3.27	36.2	3.28	36.4	3.30
	118	26.2	2.30	27.4	2.74	29.6	2.71	30.5	2.73	31.2	2.78	31.5	2.78	31.4	2.80
	122	22.4	2.09	22.0	2.08	23.6	2.06	24.4	2.07	25.0	2.10	25.3	2.11	25.3	2.13

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

MAXIMUM COOLING CAPACITY

ZRUM048GSS0

Table 39: ZRUM048GSS0 Maximum Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100%	-9.9	34.6	0.95	41.3	1.15	48.0	1.36	51.4	1.49	56.5	1.61	63.3	1.85	66.9	1.93
	-4	34.6	1.01	41.3	1.21	48.0	1.44	51.4	1.57	56.5	1.70	63.3	1.96	66.9	2.04
	0	34.6	1.05	41.3	1.26	48.0	1.50	51.4	1.63	56.5	1.76	63.3	2.04	66.9	2.12
	5	34.6	1.08	41.3	1.31	48.0	1.55	51.4	1.69	56.5	1.83	63.3	2.11	66.9	2.20
	10	34.6	1.12	41.3	1.35	48.0	1.60	51.4	1.74	56.5	1.88	63.3	2.17	66.9	2.26
	14	34.6	1.16	41.3	1.40	48.0	1.65	51.4	1.80	56.5	1.95	63.3	2.25	66.9	2.34
	20	34.6	1.19	41.3	1.44	48.0	1.71	51.4	1.85	56.5	2.01	63.3	2.31	66.9	2.41
	25	34.6	1.22	41.3	1.48	48.0	1.75	51.4	1.90	56.5	2.06	63.3	2.37	66.9	2.46
	30	34.6	1.25	41.3	1.52	48.0	1.79	51.4	1.94	56.5	2.11	63.3	2.42	66.9	2.52
	35	34.6	1.27	41.3	1.54	48.0	1.82	51.4	1.97	56.5	2.15	63.3	2.46	66.9	2.56
	40	34.6	1.29	41.3	1.56	48.0	1.85	51.4	2.00	56.5	2.18	63.3	2.50	66.9	2.60
	45	34.6	1.32	41.3	1.60	48.0	1.89	51.4	2.04	56.5	2.23	63.3	2.55	66.9	2.66
	50	34.6	1.35	41.3	1.63	48.0	1.93	51.4	2.08	56.5	2.27	63.3	2.61	66.9	2.71
	55	34.6	1.37	41.3	1.66	48.0	1.96	51.4	2.13	56.5	2.32	63.3	2.65	66.2	2.75
	60	34.6	1.41	41.3	1.72	48.0	2.05	51.4	2.21	56.5	2.41	63.1	2.73	64.3	2.80
	65	34.6	1.44	41.3	1.76	48.0	2.08	51.4	2.26	56.5	2.46	62.2	2.83	63.6	2.88
	70	34.6	1.49	41.3	1.81	48.0	2.23	51.4	2.45	56.5	2.73	61.0	3.03	62.2	3.08
	75	34.6	1.53	41.3	1.93	48.0	2.38	51.4	2.63	56.5	2.92	60.0	3.17	61.5	3.21
	80	34.6	1.73	41.3	2.20	48.0	2.72	51.4	3.01	56.5	3.35	58.4	3.44	59.6	3.49
	85	34.6	1.85	41.3	2.34	48.0	2.91	51.4	3.21	56.3	3.56	57.4	3.59	58.9	3.64
	90	34.6	2.09	41.3	2.66	48.0	3.30	51.4	3.65	54.4	3.84	55.8	3.87	57.0	3.92
	95	34.6	2.22	41.3	2.84	48.0	3.53	**51.4**	**3.90**	53.7	3.97	54.8	4.01	56.3	4.07
	100	34.6	2.40	41.3	3.06	48.0	3.82	50.5	4.10	52.7	4.18	54.1	4.22	55.3	4.28
	105	34.6	2.69	41.3	3.45	47.7	4.29	49.1	4.39	51.1	4.48	52.5	4.52	53.8	4.58
	110	34.6	3.01	41.3	3.87	47.1	4.66	48.2	4.68	49.2	4.77	50.0	4.81	50.9	4.88
	115	34.6	3.46	41.3	4.42	44.9	4.88	46.3	4.88	47.4	4.95	47.9	4.96	48.1	4.99
	118	34.6	3.49	36.2	4.15	39.1	4.10	40.3	4.14	41.3	4.20	41.7	4.21	41.5	4.23
	122	29.6	3.16	29.1	3.15	31.1	3.12	32.2	3.13	33.1	3.18	33.5	3.19	33.4	3.22

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

MAXIMUM COOLING CAPACITY

ZRUM060GSS0

MULTI V™ S WITH LGRED°

Table 40: ZRUM060GSS0 Maximum Cooling Capacities.

Combination (%)	Outdoor Air Temp. (°F DB)	Indoor Air Temp. °F DB/°F WB													
		68/57		73/61		79/64		80/67		85/70		88/73		91/76	
		TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100%	-9.9	42.5	1.21	50.6	1.46	58.8	1.73	63.0	1.88	69.2	2.04	77.6	2.35	82.0	2.45
	-4	42.5	1.27	50.6	1.54	58.8	1.82	63.0	1.99	69.2	2.15	77.6	2.48	82.0	2.58
	0	42.5	1.33	50.6	1.60	58.8	1.90	63.0	2.07	69.2	2.23	77.6	2.58	82.0	2.69
	5	42.5	1.37	50.6	1.66	58.8	1.96	63.0	2.14	69.2	2.32	77.6	2.67	82.0	2.78
	10	42.5	1.41	50.6	1.71	58.8	2.02	63.0	2.20	69.2	2.38	77.6	2.75	82.0	2.86
	14	42.5	1.46	50.6	1.77	58.8	2.09	63.0	2.28	69.2	2.47	77.6	2.85	82.0	2.97
	20	42.5	1.51	50.6	1.82	58.8	2.16	63.0	2.35	69.2	2.55	77.6	2.93	82.0	3.05
	25	42.5	1.55	50.6	1.87	58.8	2.22	63.0	2.40	69.2	2.61	77.6	3.00	82.0	3.12
	30	42.5	1.59	50.6	1.92	58.8	2.27	63.0	2.45	69.2	2.68	77.6	3.07	82.0	3.19
	35	42.5	1.61	50.6	1.95	58.8	2.31	63.0	2.49	69.2	2.72	77.6	3.12	82.0	3.25
	40	42.5	1.64	50.6	1.98	58.8	2.34	63.0	2.53	69.2	2.77	77.6	3.17	82.0	3.30
	45	42.5	1.67	50.6	2.03	58.8	2.39	63.0	2.59	69.2	2.82	77.6	3.24	82.0	3.36
	50	42.5	1.71	50.6	2.06	58.8	2.44	63.0	2.64	69.2	2.88	77.6	3.30	82.0	3.43
	55	42.5	1.73	50.6	2.10	58.8	2.49	63.0	2.70	69.2	2.94	77.6	3.36	81.1	3.48
	60	42.5	1.79	50.6	2.18	58.8	2.59	63.0	2.80	69.2	3.05	77.3	3.46	78.8	3.55
	65	42.5	1.83	50.6	2.22	58.8	2.64	63.0	2.86	69.2	3.11	76.2	3.58	77.9	3.65
	70	42.5	1.89	50.6	2.29	58.8	2.82	63.0	3.10	69.2	3.45	74.7	3.84	76.2	3.90
	75	42.5	1.93	50.6	2.44	58.8	3.02	63.0	3.33	69.2	3.70	73.6	4.02	75.3	4.07
	80	42.5	2.20	50.6	2.78	58.8	3.45	63.0	3.81	69.2	4.25	71.6	4.36	73.0	4.42
	85	42.5	2.34	50.6	2.97	58.8	3.69	63.0	4.06	68.9	4.51	70.4	4.55	72.1	4.61
	90	42.5	2.65	50.6	3.38	58.8	4.19	63.0	4.63	66.6	4.86	68.4	4.90	69.8	4.97
	95	42.5	2.81	50.6	3.59	58.8	4.47	**63.0**	**4.94**	65.8	5.03	67.2	5.08	68.9	5.15
	100	42.5	3.03	50.6	3.88	58.8	4.83	61.9	5.19	64.6	5.29	66.3	5.34	67.8	5.42
	105	42.5	3.41	50.6	4.37	58.5	5.43	60.2	5.56	62.7	5.67	64.3	5.72	65.9	5.80
	110	42.5	3.81	50.6	4.90	57.8	5.90	59.1	5.93	60.3	6.04	61.2	6.10	62.4	6.18
	115	42.5	4.38	50.6	5.60	55.0	6.18	56.7	6.18	58.1	6.27	58.7	6.28	58.9	6.32
	118	42.5	4.42	44.4	5.25	47.9	5.19	49.4	5.24	50.6	5.32	51.1	5.33	50.9	5.36
	122	36.3	4.00	35.6	3.99	38.2	3.95	39.4	3.96	40.5	4.03	41.0	4.04	40.9	4.08

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

Cooling range with the Low Ambient Baffle Kit (sold separately) is -9.9°F to +122°F.

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.0 ft. level difference between outdoor and indoor units.

Nominal cooling capacity rating obtained with air entering the indoor unit at 80ºF dry bulb (DB) and 67ºF wet bulb (WB), and outdoor ambient conditions of 95ºF dry bulb (DB) and 75ºF wet bulb (WB).

LG

HEATING CAPACITY

ZRUN024GSS0

Table 41: ZRUN024GSS0 Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-21.6	-22.0	12.7	0.75	12.7	0.86	12.6	1.01	12.5	1.16	12.4	1.31	12.3	1.49	12.3	1.60	12.2	1.74
	-17.1	-17.5	13.7	0.95	13.7	1.04	13.6	1.18	13.5	1.30	13.4	1.43	13.2	1.62	13.1	1.71	13.0	1.83
	-12.6	-13.0	14.8	1.16	14.7	1.23	14.5	1.34	14.4	1.44	14.3	1.55	14.1	1.74	14.0	1.81	13.8	1.92
	-7.0	-7.6	16.0	1.41	15.9	1.46	15.7	1.54	15.6	1.62	15.4	1.70	15.3	1.89	15.1	1.94	14.8	2.02
	-4.0	-4.4	16.7	1.54	16.6	1.59	16.4	1.65	16.2	1.71	16.1	1.78	15.9	1.97	15.7	2.01	15.4	2.08
	0.0	-0.4	17.6	1.72	17.4	1.75	17.2	1.80	17.1	1.84	16.9	1.88	16.7	2.07	16.4	2.11	16.1	2.15
	5.0	4.5	18.7	1.95	18.6	1.96	18.3	1.98	18.1	2.00	17.9	2.02	17.7	2.21	17.4	2.23	17.0	2.25
	10.0	9.0	19.9	2.17	19.7	2.17	19.4	2.16	19.2	2.16	19.0	2.15	18.7	2.34	18.4	2.34	17.9	2.34
	17.0	15.0	21.4	2.48	21.2	2.46	20.9	2.42	20.6	2.38	20.4	2.34	20.1	2.53	19.7	2.51	19.2	2.48
	20.0	19.0	23.9	2.62	23.7	2.58	23.4	2.53	23.1	2.47	22.8	2.42	22.5	2.61	22.0	2.58	21.3	2.53
	25.0	23.0	27.9	2.84	27.8	2.79	27.6	2.71	27.3	2.63	26.9	2.55	26.4	2.74	25.9	2.69	24.9	2.63
	30.0	28.0	32.0	3.07	31.9	3.00	31.8	2.89	31.4	2.79	31.0	2.69	30.4	2.88	29.8	2.81	28.4	2.72
	35.0	32.0	36.1	3.29	36.1	3.20	36.1	3.07	35.5	2.95	35.0	2.82	32.9	2.70	31.0	2.64	28.4	2.55
	40.0	36.0	36.1	3.12	36.1	3.01	36.1	2.83	35.5	2.74	35.0	2.64	32.9	2.53	31.0	2.46	28.4	2.38
	45.0	41.0	36.1	2.74	36.1	2.68	36.1	2.60	35.5	2.52	35.0	2.45	32.9	2.35	31.0	2.29	28.4	2.21
	47.0	43.0	36.1	2.63	36.1	2.58	36.1	2.49	35.5	2.42	**35.0**	**2.35**	32.9	2.25	31.0	2.20	28.4	2.12
	50.0	46.0	36.1	2.54	36.1	2.48	36.1	2.40	35.5	2.33	35.0	2.26	32.9	2.17	31.0	2.12	28.4	2.04
	55.0	51.0	36.1	2.38	36.1	2.33	36.1	2.25	35.5	2.19	35.0	2.13	32.9	2.04	31.0	1.99	28.4	1.92
	60.0	56.0	36.1	2.21	36.1	2.17	36.1	2.10	35.5	2.04	35.0	1.98	32.9	1.90	31.0	1.85	28.4	1.78
120	-21.6	-22.0	12.6	0.93	12.6	1.00	12.5	1.12	12.4	1.22	12.3	1.33	12.2	1.39	12.2	1.40	12.1	1.42
	-17.1	-17.5	13.5	1.05	13.4	1.11	13.3	1.22	13.2	1.30	13.1	1.39	12.9	1.45	12.7	1.46	12.5	1.48
	-12.6	-13.0	14.3	1.17	14.3	1.22	14.1	1.31	14.0	1.39	13.8	1.46	13.5	1.51	13.3	1.52	12.9	1.53
	-7.0	-7.6	15.4	1.32	15.3	1.36	15.2	1.43	15.0	1.49	14.8	1.55	14.3	1.59	13.9	1.59	13.4	1.60
	-4.0	-4.4	16.0	1.40	15.9	1.43	15.7	1.49	15.5	1.54	15.3	1.59	14.8	1.63	14.3	1.63	13.7	1.63
	0.0	-0.4	16.7	1.50	16.6	1.53	16.4	1.57	16.2	1.61	15.9	1.65	15.3	1.68	14.8	1.68	14.0	1.68
	5.0	4.5	17.7	1.64	17.5	1.65	17.3	1.68	17.0	1.70	16.7	1.73	16.0	1.75	15.4	1.74	14.5	1.74
	10.0	9.0	18.6	1.77	18.5	1.77	18.2	1.78	17.9	1.79	17.6	1.81	16.8	1.81	16.0	1.81	14.9	1.80
	17.0	15.0	20.0	1.96	19.8	1.94	19.5	1.93	19.1	1.92	18.7	1.91	17.8	1.91	16.8	1.90	15.5	1.88
	20.0	19.0	22.6	2.04	22.5	2.02	22.2	1.99	21.6	1.97	21.1	1.96	20.0	1.95	18.8	1.93	17.4	1.92
	25.0	23.0	27.1	2.17	26.9	2.14	26.6	2.09	25.8	2.06	25.0	2.03	23.6	2.01	22.3	2.00	20.4	1.98
	30.0	28.0	31.6	2.30	31.3	2.26	31.0	2.20	30.0	2.15	28.9	2.11	27.3	2.08	25.7	2.06	23.5	2.04
	35.0	32.0	36.0	2.44	35.8	2.38	35.4	2.30	34.1	2.24	32.9	2.19	31.0	2.15	29.1	2.12	26.6	2.09
	40.0	36.0	36.0	2.45	35.8	2.40	35.4	2.33	34.1	2.28	32.9	2.23	31.0	2.19	29.1	2.16	26.6	2.12
	45.0	41.0	36.0	2.47	35.8	2.43	35.4	2.36	34.1	2.32	32.9	2.27	31.0	2.23	29.1	2.20	26.6	2.16
	47.0	43.0	36.0	2.47	35.8	2.43	35.4	2.36	34.1	2.32	**32.9**	**2.27**	31.0	2.24	29.1	2.20	26.6	2.16
	50.0	46.0	36.0	2.38	35.8	2.34	35.4	2.28	34.1	2.23	32.9	2.19	31.0	2.15	29.1	2.12	26.6	2.08
	55.0	51.0	36.0	2.24	35.8	2.20	35.4	2.14	34.1	2.10	32.9	2.06	31.0	2.02	29.1	1.99	26.6	1.95
	60.0	56.0	36.0	2.08	35.8	2.04	35.4	1.99	34.1	1.95	32.9	1.91	31.0	1.88	29.1	1.85	26.6	1.81
110	-21.6	-22.0	12.6	1.18	12.5	1.24	12.4	1.33	12.4	1.42	12.3	1.52	12.2	1.70	12.1	1.84	12.0	2.04
	-17.1	-17.5	13.5	1.27	13.5	1.32	13.4	1.39	13.2	1.48	13.0	1.56	12.8	1.72	12.6	1.85	12.4	2.02
	-12.6	-13.0	14.5	1.36	14.4	1.40	14.3	1.46	14.0	1.53	13.7	1.61	13.4	1.75	13.1	1.86	12.8	2.00
	-7.0	-7.6	15.8	1.47	15.6	1.50	15.5	1.55	15.1	1.61	14.7	1.66	14.2	1.78	13.8	1.87	13.2	1.99
	-4.0	-4.4	16.4	1.53	16.3	1.55	16.1	1.59	15.6	1.64	15.2	1.69	14.6	1.80	14.1	1.87	13.5	1.98
	0.0	-0.4	17.3	1.61	17.1	1.63	16.9	1.65	16.4	1.69	15.8	1.73	15.1	1.82	14.6	1.88	13.8	1.96
	5.0	4.5	18.4	1.71	18.2	1.72	18.0	1.73	17.3	1.76	16.6	1.78	15.8	1.85	15.1	1.89	14.2	1.95
	10.0	9.0	19.5	1.81	19.3	1.81	19.0	1.80	18.2	1.82	17.4	1.84	16.5	1.88	15.7	1.90	14.6	1.93
	17.0	15.0	21.0	1.94	20.8	1.93	20.5	1.91	19.5	1.91	18.6	1.91	17.5	1.92	16.5	1.91	15.2	1.90
	20.0	19.0	23.5	2.00	23.1	1.98	22.5	1.95	21.5	1.95	20.4	1.94	19.5	1.94	18.7	1.92	17.2	1.89
	25.0	23.0	27.5	2.10	26.8	2.07	25.9	2.03	24.7	2.01	23.5	1.99	22.9	1.97	22.5	1.93	20.7	1.88
	30.0	28.0	31.6	2.20	30.6	2.16	29.2	2.11	27.9	2.07	26.6	2.04	26.3	2.00	26.2	1.94	24.1	1.86
	35.0	32.0	35.6	2.30	34.4	2.25	32.5	2.18	31.0	2.13	29.5	2.09	27.8	2.03	26.2	1.97	24.1	1.90
	40.0	36.0	35.6	2.28	34.4	2.25	32.5	2.20	31.0	2.16	29.5	2.12	27.8	2.07	26.2	2.01	24.1	1.93
	45.0	41.0	35.6	2.27	34.4	2.24	32.5	2.21	31.0	2.18	29.5	2.16	27.8	2.10	26.2	2.05	24.1	1.98
	47.0	43.0	35.6	2.27	34.4	2.25	32.5	2.21	31.0	2.19	**29.5**	**2.16**	27.8	2.11	26.2	2.05	24.1	1.98
	50.0	46.0	35.6	2.19	34.4	2.16	32.5	2.13	31.0	2.11	29.5	2.08	27.8	2.03	26.2	1.98	24.1	1.91
	55.0	51.0	35.6	2.05	34.4	2.03	32.5	2.00	31.0	1.98	29.5	1.95	27.8	1.91	26.2	1.86	24.1	1.79
	60.0	56.0	35.6	1.91	34.4	1.89	32.5	1.86	31.0	1.84	29.5	1.82	27.8	1.77	26.2	1.73	24.1	1.66

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUN024GSS0

MULTI V™ S WITH LGRED°

Table 42: ZRUN024GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	12.5	0.96	12.5	1.10	12.4	1.30	12.3	1.45	12.2	1.59	12.1	1.78	12.1	1.90	12.0	2.07
	-17.1	-17.5	13.1	1.08	13.3	1.20	13.1	1.38	12.9	1.49	12.8	1.62	12.6	1.82	12.4	1.93	12.2	2.07
	-12.6	-13.0	13.7	1.20	14.2	1.31	13.8	1.46	13.6	1.54	13.3	1.66	13.0	1.87	12.8	1.95	12.4	2.07
	-7.0	-7.6	14.4	1.35	15.2	1.44	14.8	1.56	14.4	1.60	14.0	1.71	13.6	1.92	13.2	1.99	12.7	2.08
	-4.0	-4.4	14.8	1.43	15.8	1.51	15.3	1.61	14.8	1.63	14.4	1.74	13.9	1.95	13.4	2.00	12.8	2.08
	0.0	-0.4	15.4	1.54	16.6	1.60	15.9	1.68	15.4	1.67	14.9	1.77	14.3	1.98	13.7	2.03	13.0	2.08
	5.0	4.5	16.0	1.68	17.5	1.71	16.7	1.77	16.1	1.73	15.5	1.82	14.8	2.03	14.1	2.05	13.2	2.08
	10.0	9.0	17.9	1.81	18.5	1.83	17.5	1.86	16.8	1.81	16.1	1.86	15.3	2.08	14.5	2.08	13.5	2.09
	17.0	15.0	20.6	2.00	19.8	1.99	18.7	1.98	17.8	1.95	17.0	1.92	16.0	2.14	15.1	2.12	13.8	2.09
	20.0	19.0	22.6	2.10	21.8	2.08	20.8	2.10	20.1	2.09	19.3	2.03	18.2	2.17	17.1	2.14	15.7	2.09
	25.0	23.0	25.9	2.26	25.0	2.22	24.4	2.30	24.0	2.25	23.2	2.21	21.8	2.22	20.5	2.17	18.8	2.10
	30.0	28.0	29.3	2.43	28.2	2.36	27.9	2.49	27.8	2.45	27.0	2.40	25.4	2.27	23.9	2.20	21.9	2.10
	35.0	32.0	32.7	2.59	31.5	2.51	29.7	2.38	28.3	2.33	27.0	2.27	25.4	2.15	23.9	2.08	21.9	1.99
	40.0	36.0	32.7	2.43	31.5	2.37	29.7	2.27	28.3	2.21	27.0	2.15	25.4	2.03	23.9	1.97	21.9	1.88
	45.0	41.0	32.7	2.28	31.5	2.23	29.7	2.16	28.3	2.09	27.0	2.03	25.4	1.91	23.9	1.85	21.9	1.77
	47.0	43.0	32.7	2.22	31.5	2.17	29.7	2.11	28.3	2.04	**27.0**	**1.98**	25.4	1.87	23.9	1.81	21.9	1.73
	50.0	46.0	32.7	2.14	31.5	2.09	29.7	2.03	28.3	1.97	27.0	1.91	25.4	1.80	23.9	1.74	21.9	1.66
	55.0	51.0	32.7	2.01	31.5	1.97	29.7	1.90	28.3	1.85	27.0	1.79	25.4	1.69	23.9	1.63	21.9	1.56
	60.0	56.0	32.7	1.87	31.5	1.83	29.7	1.77	28.3	1.72	27.0	1.66	25.4	1.57	23.9	1.52	21.9	1.45
90	-21.6	-22.0	12.5	1.24	12.4	1.31	12.3	1.42	12.3	1.57	12.2	1.72	12.1	1.82	12.0	1.92	11.9	2.05
	-17.1	-17.5	13.1	1.30	13.0	1.37	12.8	1.46	12.7	1.59	12.5	1.72	12.3	1.81	12.2	1.89	12.0	2.00
	-12.6	-13.0	13.8	1.37	13.6	1.42	13.3	1.51	13.1	1.62	12.8	1.73	12.5	1.80	12.3	1.87	12.0	1.95
	-7.0	-7.6	14.6	1.45	14.3	1.50	13.9	1.56	13.6	1.65	13.2	1.74	12.8	1.78	12.5	1.83	12.0	1.90
	-4.0	-4.4	15.0	1.50	14.7	1.53	14.2	1.59	13.8	1.66	13.5	1.74	13.0	1.78	12.6	1.81	12.0	1.86
	0.0	-0.4	15.6	1.56	15.2	1.58	14.6	1.62	14.2	1.68	13.7	1.75	13.2	1.77	12.7	1.79	12.0	1.82
	5.0	4.5	16.4	1.63	15.9	1.65	15.1	1.67	14.6	1.71	14.1	1.75	13.5	1.75	12.9	1.76	12.0	1.77
	10.0	9.0	17.1	1.71	16.5	1.71	15.7	1.72	15.1	1.74	14.5	1.76	13.7	1.74	13.0	1.73	12.1	1.72
	17.0	15.0	18.1	1.81	17.4	1.80	16.4	1.78	15.7	1.78	15.0	1.77	14.1	1.72	13.2	1.69	12.1	1.64
	20.0	19.0	20.9	1.86	20.1	1.84	18.9	1.81	18.1	1.79	17.2	1.77	16.2	1.72	15.2	1.67	13.9	1.61
	25.0	23.0	25.4	1.93	24.4	1.90	23.0	1.86	22.0	1.82	21.0	1.78	19.7	1.70	18.5	1.64	16.9	1.56
	30.0	28.0	29.9	2.00	28.8	1.96	27.1	1.90	25.9	1.84	24.7	1.79	23.3	1.69	21.9	1.61	20.0	1.51
	35.0	32.0	29.9	2.01	28.8	1.97	27.1	1.91	25.9	1.85	24.7	1.79	23.3	1.70	21.9	1.62	20.0	1.51
	40.0	36.0	29.9	2.02	28.8	1.98	27.1	1.92	25.9	1.86	24.7	1.80	23.3	1.71	21.9	1.63	20.0	1.52
	45.0	41.0	29.9	2.03	28.8	1.98	27.1	1.92	25.9	1.87	24.7	1.81	23.3	1.72	21.9	1.63	20.0	1.52
	47.0	43.0	29.9	2.03	28.8	1.99	27.1	1.93	25.9	1.87	**24.7**	**1.81**	23.3	1.72	21.9	1.63	20.0	1.52
	50.0	46.0	29.9	1.95	28.8	1.91	27.1	1.86	25.9	1.80	24.7	1.74	23.3	1.65	21.9	1.57	20.0	1.47
	55.0	51.0	29.9	1.83	28.8	1.80	27.1	1.74	25.9	1.69	24.7	1.64	23.3	1.55	21.9	1.48	20.0	1.38
	60.0	56.0	29.9	1.70	28.8	1.67	27.1	1.62	25.9	1.57	24.7	1.52	23.3	1.44	21.9	1.37	20.0	1.28
80	-21.6	-22.0	12.4	1.25	12.4	1.33	12.3	1.45	12.2	1.54	12.1	1.63	12.0	1.86	12.0	1.98	11.2	2.14
	-17.1	-17.5	13.0	1.29	12.9	1.36	12.7	1.47	12.5	1.54	12.4	1.62	12.2	1.82	12.0	1.92	11.2	2.06
	-12.6	-13.0	13.5	1.34	13.3	1.40	13.1	1.49	12.8	1.55	12.6	1.60	12.3	1.77	12.1	1.86	11.3	1.98
	-7.0	-7.6	14.2	1.39	14.0	1.44	13.6	1.51	13.2	1.55	12.9	1.59	12.5	1.72	12.2	1.79	11.3	1.88
	-4.0	-4.4	14.6	1.42	14.3	1.46	13.8	1.52	13.5	1.55	13.1	1.58	12.6	1.69	12.2	1.75	11.3	1.83
	0.0	-0.4	15.1	1.46	14.7	1.49	14.2	1.54	13.7	1.55	13.3	1.57	12.8	1.66	12.3	1.70	11.4	1.76
	5.0	4.5	15.7	1.51	15.3	1.53	14.6	1.55	14.1	1.56	13.6	1.56	13.0	1.61	12.4	1.63	11.4	1.67
	10.0	9.0	16.4	1.56	15.8	1.57	15.0	1.57	14.5	1.56	13.9	1.55	13.1	1.56	12.5	1.57	11.5	1.58
	17.0	15.0	17.2	1.63	16.6	1.62	15.7	1.60	15.0	1.57	14.3	1.53	13.4	1.50	12.6	1.48	11.5	1.45
	20.0	19.0	20.8	1.66	20.1	1.64	18.9	1.61	18.1	1.57	17.2	1.53	16.1	1.47	15.2	1.44	13.9	1.40
	25.0	23.0	26.8	1.71	25.8	1.68	24.3	1.63	23.2	1.57	22.1	1.51	20.8	1.42	19.5	1.38	17.9	1.31
	30.0	28.0	26.8	1.71	25.8	1.68	24.3	1.64	23.2	1.58	22.1	1.52	20.8	1.43	19.5	1.38	17.9	1.31
	35.0	32.0	26.8	1.72	25.8	1.69	24.3	1.64	23.2	1.58	22.1	1.52	20.8	1.44	19.5	1.39	17.9	1.32
	40.0	36.0	26.8	1.72	25.8	1.69	24.3	1.64	23.2	1.58	22.1	1.52	20.8	1.44	19.5	1.39	17.9	1.32
	45.0	41.0	26.8	1.72	25.8	1.69	24.3	1.64	23.2	1.58	22.1	1.53	20.8	1.45	19.5	1.39	17.9	1.32
	47.0	43.0	26.8	1.73	25.8	1.69	24.3	1.64	23.2	1.59	**22.1**	**1.53**	20.8	1.45	19.5	1.40	17.9	1.32
	50.0	46.0	26.8	1.66	25.8	1.63	24.3	1.58	23.2	1.53	22.1	1.47	20.8	1.40	19.5	1.35	17.9	1.27
	55.0	51.0	26.8	1.56	25.8	1.53	24.3	1.49	23.2	1.43	22.1	1.38	20.8	1.31	19.5	1.26	17.9	1.20
	60.0	56.0	26.8	1.45	25.8	1.42	24.3	1.38	23.2	1.33	22.1	1.29	20.8	1.22	19.5	1.17	17.9	1.11

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70°F dry bulb (DB) and outdoor ambient conditions of 47°F dry bulb (DB) and 43°F wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Table 43: ZRUN024GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-21.6	-22.0	12.3	1.34	12.3	1.38	12.2	1.43	12.1	1.58	12.1	1.73	12.0	1.93	11.9	2.05	11.1	2.21
	-17.1	-17.5	12.9	1.36	12.7	1.39	12.6	1.44	12.4	1.56	12.3	1.69	12.1	1.86	12.0	1.97	11.1	2.11
	-12.6	-13.0	13.4	1.38	13.2	1.41	12.9	1.44	12.7	1.55	12.5	1.65	12.3	1.80	12.0	1.89	11.2	2.01
	-7.0	-7.6	14.1	1.41	13.8	1.42	13.4	1.44	13.1	1.53	12.8	1.61	12.4	1.72	12.1	1.80	11.2	1.89
	-4.0	-4.4	14.4	1.43	14.1	1.43	13.7	1.45	13.3	1.51	12.9	1.58	12.5	1.68	12.2	1.74	11.3	1.82
	0.0	-0.4	14.9	1.45	14.5	1.45	14.0	1.45	13.6	1.50	13.1	1.55	12.7	1.63	12.2	1.67	11.3	1.74
	5.0	4.5	15.5	1.47	15.0	1.47	14.4	1.45	13.9	1.48	13.4	1.51	12.8	1.56	12.3	1.59	11.3	1.63
	10.0	9.0	16.1	1.50	15.6	1.48	14.8	1.46	14.2	1.46	13.6	1.47	13.0	1.49	12.4	1.50	11.4	1.52
	17.0	15.0	16.9	1.53	16.3	1.51	15.4	1.46	14.7	1.44	14.0	1.41	13.2	1.39	12.5	1.38	11.4	1.36
	20.0	19.0	19.1	1.55	18.4	1.52	17.4	1.46	16.6	1.42	15.8	1.39	14.9	1.35	14.1	1.33	12.9	1.30
	25.0	23.0	22.7	1.58	21.9	1.53	20.7	1.47	19.7	1.41	18.8	1.35	17.7	1.28	16.7	1.24	15.4	1.19
	30.0	28.0	22.7	1.56	21.9	1.52	20.7	1.46	19.7	1.40	18.8	1.34	17.7	1.27	16.7	1.23	15.4	1.17
	35.0	32.0	22.7	1.55	21.9	1.51	20.7	1.44	19.7	1.39	18.8	1.33	17.7	1.26	16.7	1.21	15.4	1.15
	40.0	36.0	22.7	1.53	21.9	1.49	20.7	1.43	19.7	1.37	18.8	1.32	17.7	1.25	16.7	1.19	15.4	1.12
	45.0	41.0	22.7	1.51	21.9	1.47	20.7	1.41	19.7	1.36	18.8	1.30	17.7	1.23	16.7	1.17	15.4	1.09
	47.0	43.0	22.7	1.51	21.9	1.47	20.7	1.41	19.7	1.36	**18.8**	**1.31**	17.7	1.24	16.7	1.17	15.4	1.09
	50.0	46.0	22.7	1.46	21.9	1.42	20.7	1.36	19.7	1.31	18.8	1.26	17.7	1.19	16.7	1.13	15.4	1.05
	55.0	51.0	22.7	1.37	21.9	1.33	20.7	1.28	19.7	1.23	18.8	1.18	17.7	1.12	16.7	1.06	15.4	0.98
	60.0	56.0	22.7	1.27	21.9	1.24	20.7	1.19	19.7	1.14	18.8	1.10	17.7	1.04	16.7	0.99	15.4	0.92
60	-21.6	-22.0	11.4	1.23	11.4	1.27	11.3	1.33	11.2	1.47	11.2	1.62	11.1	1.82	11.0	1.94	10.9	2.11
	-17.1	-17.5	12.0	1.25	11.9	1.28	11.7	1.33	11.6	1.45	11.5	1.58	11.3	1.76	11.2	1.86	11.0	2.00
	-12.6	-13.0	12.6	1.27	12.4	1.29	12.2	1.33	12.0	1.43	11.8	1.54	11.5	1.69	11.3	1.78	11.0	1.90
	-7.0	-7.6	13.4	1.30	13.1	1.31	12.7	1.33	12.4	1.41	12.1	1.49	11.8	1.61	11.5	1.68	11.1	1.77
	-4.0	-4.4	13.8	1.31	13.5	1.32	13.0	1.33	12.7	1.39	12.3	1.46	11.9	1.56	11.6	1.62	11.1	1.70
	0.0	-0.4	14.3	1.33	13.9	1.33	13.4	1.33	13.0	1.38	12.6	1.42	12.1	1.51	11.7	1.55	11.1	1.60
	5.0	4.5	14.9	1.35	14.5	1.34	13.9	1.33	13.4	1.35	12.9	1.38	12.3	1.43	11.8	1.46	11.2	1.49
	10.0	9.0	15.6	1.37	15.1	1.35	14.4	1.32	13.8	1.33	13.2	1.33	12.6	1.36	12.0	1.36	11.2	1.37
	17.0	15.0	16.5	1.40	16.0	1.37	15.1	1.32	14.4	1.30	13.7	1.27	12.9	1.26	12.2	1.24	11.2	1.21
	20.0	19.0	17.6	1.41	17.0	1.38	16.1	1.32	15.4	1.28	14.6	1.24	13.7	1.21	13.0	1.18	12.0	1.14
	25.0	23.0	19.4	1.44	18.8	1.39	17.8	1.32	16.9	1.26	16.1	1.20	15.2	1.14	14.3	1.09	13.2	1.02
	30.0	28.0	19.4	1.42	18.8	1.37	17.8	1.30	16.9	1.24	16.1	1.18	15.2	1.12	14.3	1.07	13.2	1.00
	35.0	32.0	19.4	1.40	18.8	1.35	17.8	1.28	16.9	1.22	16.1	1.16	15.2	1.10	14.3	1.04	13.2	0.97
	40.0	36.0	19.4	1.38	18.8	1.33	17.8	1.25	16.9	1.20	16.1	1.14	15.2	1.07	14.3	1.01	13.2	0.94
	45.0	41.0	19.4	1.36	18.8	1.31	17.8	1.22	16.9	1.17	16.1	1.12	15.2	1.05	14.3	0.98	13.2	0.90
	47.0	43.0	19.4	1.36	18.8	1.31	17.8	1.22	16.9	1.17	**16.1**	**1.12**	15.2	1.05	14.3	0.98	13.2	0.90
	50.0	46.0	19.4	1.31	18.8	1.26	17.8	1.18	16.9	1.13	16.1	1.08	15.2	1.01	14.3	0.95	13.2	0.87
	55.0	51.0	19.4	1.23	18.8	1.18	17.8	1.11	16.9	1.06	16.1	1.01	15.2	0.95	14.3	0.89	13.2	0.81
	60.0	56.0	19.4	1.15	18.8	1.10	17.8	1.03	16.9	0.99	16.1	0.94	15.2	0.88	14.3	0.83	13.2	0.76
50	-21.6	-22.0	10.6	1.06	10.5	1.10	10.5	1.15	10.4	1.30	10.3	1.45	10.2	1.65	10.0	1.77	9.8	1.93
	-17.1	-17.5	11.4	1.25	11.3	1.27	11.2	1.38	11.0	1.49	10.9	1.60	10.7	1.78	10.4	1.85	10.1	1.99
	-12.6	-13.0	12.2	1.45	12.0	1.45	11.9	1.61	11.7	1.68	11.4	1.75	11.2	1.92	10.8	1.94	10.5	2.05
	-7.0	-7.6	13.2	1.69	12.9	1.66	12.8	1.90	12.4	1.92	12.0	1.94	11.9	2.08	11.3	2.05	10.9	2.13
	-4.0	-4.4	13.7	1.82	13.4	1.78	13.3	2.05	12.8	2.05	12.4	2.04	12.2	2.17	11.6	2.10	10.9	2.08
	0.0	-0.4	14.5	1.99	14.0	1.93	14.0	2.26	13.4	2.22	12.9	2.18	12.6	2.29	11.9	2.18	10.9	2.03
	5.0	4.5	15.4	2.21	14.8	2.13	14.8	2.51	14.1	2.43	13.4	2.35	12.6	2.20	11.9	2.09	10.9	1.95
	10.0	9.0	16.3	2.42	15.7	2.32	14.8	2.17	14.1	2.09	13.4	2.02	12.6	1.90	11.9	1.80	10.9	1.68
	17.0	15.0	16.3	2.09	15.7	2.00	14.8	1.87	14.1	1.80	13.4	1.74	12.6	1.63	11.9	1.55	10.9	1.44
	20.0	19.0	16.3	1.98	15.7	1.90	14.8	1.78	14.1	1.71	13.4	1.65	12.6	1.55	11.9	1.47	10.9	1.36
	25.0	23.0	16.3	1.81	15.7	1.74	14.8	1.62	14.1	1.56	13.4	1.51	12.6	1.42	11.9	1.34	10.9	1.24
	30.0	28.0	16.3	1.64	15.7	1.58	14.8	1.47	14.1	1.42	13.4	1.36	12.6	1.28	11.9	1.21	10.9	1.12
	35.0	32.0	16.3	1.47	15.7	1.41	14.8	1.32	14.1	1.27	13.4	1.22	12.6	1.15	11.9	1.09	10.9	1.00
	40.0	36.0	16.3	1.31	15.7	1.25	14.8	1.17	14.1	1.12	13.4	1.08	12.6	1.02	11.9	0.96	10.9	0.88
	45.0	41.0	16.3	1.14	15.7	1.10	14.8	1.03	14.1	0.98	13.4	0.94	12.6	0.89	11.9	0.84	10.9	0.77
	47.0	43.0	16.3	1.10	15.7	1.05	14.8	0.99	14.1	0.95	**13.4**	**0.90**	12.6	0.85	11.9	0.80	10.9	0.74
	50.0	46.0	16.3	1.06	15.7	1.02	14.8	0.95	14.1	0.91	13.4	0.87	12.6	0.82	11.9	0.77	10.9	0.71
	55.0	51.0	16.3	0.99	15.7	0.95	14.8	0.89	14.1	0.85	13.4	0.82	12.6	0.77	11.9	0.73	10.9	0.67
	60.0	56.0	16.3	0.92	15.7	0.89	14.8	0.83	14.1	0.79	13.4	0.76	12.6	0.72	11.9	0.68	10.9	0.62

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.
0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM036GSS0

MULTI V™ S WITH LGRED°

Table 44: ZRUM036GSS0 Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-21.6	-22.0	19.8	0.84	19.7	0.95	19.6	1.12	19.5	1.29	19.3	1.45	19.2	1.66	19.1	1.78	19.0	1.94
	-17.1	-17.5	21.3	1.06	21.2	1.16	21.0	1.31	20.9	1.45	20.7	1.59	20.5	1.79	20.4	1.90	20.2	2.03
	-12.6	-13.0	22.8	1.28	22.7	1.37	22.5	1.49	22.3	1.60	22.1	1.72	21.9	1.93	21.7	2.01	21.4	2.13
	-7.0	-7.6	24.7	1.56	24.5	1.62	24.2	1.71	24.0	1.80	23.8	1.89	23.6	2.10	23.3	2.16	22.9	2.25
	-4.0	-4.4	25.7	1.71	25.5	1.76	25.2	1.84	25.0	1.91	24.7	1.97	24.5	2.18	24.1	2.24	23.7	2.31
	0.0	-0.4	27.1	1.91	26.8	1.95	26.5	2.00	26.2	2.05	26.0	2.09	25.7	2.30	25.3	2.34	24.8	2.39
	5.0	4.5	28.7	2.16	28.5	2.18	28.1	2.20	27.8	2.22	27.5	2.24	27.2	2.45	26.7	2.47	26.2	2.50
	10.0	9.0	30.4	2.41	30.1	2.41	29.7	2.40	29.4	2.40	29.0	2.39	28.6	2.60	28.2	2.60	27.5	2.60
	17.0	15.0	32.8	2.76	32.4	2.73	31.9	2.69	31.5	2.64	31.2	2.60	30.7	2.81	30.2	2.78	29.4	2.75
	20.0	19.0	36.7	2.91	36.4	2.87	35.9	2.81	35.5	2.75	35.1	2.69	34.5	2.90	33.9	2.86	32.8	2.82
	25.0	23.0	43.1	3.16	42.9	3.10	42.6	3.01	42.1	2.92	41.6	2.84	40.8	3.05	40.0	2.99	38.5	2.92
	30.0	28.0	49.6	3.41	49.5	3.33	49.4	3.21	48.7	3.10	48.0	2.98	47.1	3.19	46.1	3.12	44.1	3.03
	35.0	32.0	56.1	3.66	56.1	3.56	56.1	3.41	55.3	3.27	54.5	3.13	51.2	3.00	48.2	2.93	44.1	2.84
	40.0	36.0	56.1	3.47	56.1	3.34	56.1	3.15	55.3	3.04	54.5	2.93	51.2	2.81	48.2	2.74	44.1	2.65
	45.0	41.0	56.1	3.04	56.1	2.98	56.1	2.88	55.3	2.80	54.5	2.72	51.2	2.61	48.2	2.54	44.1	2.45
	47.0	43.0	56.1	2.92	56.1	2.86	56.1	2.77	55.3	2.69	**54.5**	**2.61**	51.2	2.50	48.2	2.44	44.1	2.36
	50.0	46.0	56.1	2.82	56.1	2.76	56.1	2.67	55.3	2.59	54.5	2.52	51.2	2.41	48.2	2.35	44.1	2.27
	55.0	51.0	56.1	2.64	56.1	2.59	56.1	2.50	55.3	2.43	54.5	2.36	51.2	2.26	48.2	2.21	44.1	2.13
	60.0	56.0	56.1	2.46	56.1	2.41	56.1	2.33	55.3	2.26	54.5	2.20	51.2	2.11	48.2	2.05	44.1	1.98
120	-21.6	-22.0	19.6	1.03	19.6	1.12	19.4	1.25	19.3	1.36	19.2	1.47	19.1	1.54	19.0	1.56	18.8	1.58
	-17.1	-17.5	21.2	1.22	21.0	1.29	20.9	1.40	20.7	1.50	20.5	1.60	20.2	1.66	20.0	1.67	19.6	1.69
	-12.6	-13.0	22.7	1.41	22.5	1.47	22.3	1.56	22.1	1.64	21.9	1.72	21.4	1.78	21.0	1.78	20.4	1.79
	-7.0	-7.6	24.5	1.64	24.4	1.69	24.1	1.75	23.8	1.82	23.5	1.88	22.9	1.92	22.2	1.92	21.4	1.93
	-4.0	-4.4	25.6	1.77	25.4	1.80	25.1	1.86	24.8	1.91	24.4	1.96	23.6	2.00	22.9	2.00	21.9	2.00
	0.0	-0.4	26.9	1.93	26.7	1.96	26.4	1.99	26.0	2.03	25.6	2.07	24.7	2.10	23.8	2.10	22.6	2.09
	5.0	4.5	28.6	2.14	28.3	2.15	28.0	2.17	27.5	2.19	27.1	2.21	26.0	2.23	24.9	2.22	23.5	2.21
	10.0	9.0	30.3	2.35	30.0	2.35	29.6	2.34	29.1	2.35	28.5	2.35	27.3	2.35	26.1	2.34	24.3	2.33
	17.0	15.0	32.6	2.65	32.3	2.62	31.9	2.58	31.2	2.56	30.6	2.55	29.1	2.53	27.6	2.52	25.6	2.49
	20.0	19.0	36.5	2.77	36.2	2.74	35.7	2.69	34.9	2.66	34.0	2.63	32.3	2.61	30.6	2.59	28.2	2.57
	25.0	23.0	43.0	2.98	42.7	2.93	42.2	2.86	40.9	2.81	39.7	2.77	37.6	2.74	35.4	2.71	32.6	2.68
	30.0	28.0	49.5	3.19	49.1	3.13	48.6	3.03	47.0	2.97	45.4	2.91	42.9	2.87	40.3	2.84	36.9	2.80
	35.0	32.0	56.0	3.40	55.6	3.32	55.0	3.21	53.1	3.13	51.1	3.05	48.2	2.99	45.2	2.96	41.3	2.92
	40.0	36.0	56.0	3.13	55.6	3.07	55.0	2.97	53.1	2.91	51.1	2.84	48.2	2.79	45.2	2.76	41.3	2.71
	45.0	41.0	56.0	2.86	55.6	2.81	55.0	2.73	53.1	2.68	51.1	2.63	48.2	2.59	45.2	2.55	41.3	2.50
	47.0	43.0	56.0	2.75	55.6	2.70	55.0	2.63	53.1	2.58	**51.1**	**2.53**	48.2	2.49	45.2	2.45	41.3	2.40
	50.0	46.0	56.0	2.65	55.6	2.60	55.0	2.53	53.1	2.48	51.1	2.43	48.2	2.39	45.2	2.36	41.3	2.31
	55.0	51.0	56.0	2.49	55.6	2.44	55.0	2.37	53.1	2.33	51.1	2.28	48.2	2.25	45.2	2.21	41.3	2.17
	60.0	56.0	56.0	2.31	55.6	2.27	55.0	2.21	53.1	2.17	51.1	2.12	48.2	2.09	45.2	2.06	41.3	2.02
110	-21.6	-22.0	19.5	1.31	19.5	1.38	19.3	1.47	19.2	1.58	19.1	1.69	18.9	1.88	18.9	2.05	18.7	2.26
	-17.1	-17.5	21.0	1.46	20.9	1.52	20.7	1.60	20.5	1.69	20.2	1.78	19.9	1.96	19.6	2.12	19.2	2.31
	-12.6	-13.0	22.5	1.61	22.3	1.66	22.1	1.72	21.7	1.80	21.3	1.88	20.8	2.03	20.3	2.20	19.8	2.36
	-7.0	-7.6	24.3	1.80	24.1	1.83	23.9	1.88	23.2	1.94	22.6	2.00	21.9	2.13	21.3	2.30	20.4	2.42
	-4.0	-4.4	25.3	1.90	25.1	1.92	24.8	1.96	24.1	2.01	23.3	2.07	22.5	2.18	21.8	2.35	20.8	2.45
	0.0	-0.4	26.6	2.04	26.4	2.05	26.0	2.07	25.2	2.11	24.3	2.15	23.3	2.24	22.4	2.42	21.2	2.49
	5.0	4.5	28.2	2.20	28.0	2.21	27.6	2.21	26.5	2.24	25.5	2.26	24.3	2.33	23.2	2.50	21.8	2.55
	10.0	9.0	29.9	2.37	29.6	2.36	29.1	2.35	27.9	2.36	26.7	2.37	25.3	2.41	24.1	2.59	22.4	2.60
	17.0	15.0	32.2	2.61	31.8	2.58	31.3	2.54	29.9	2.53	28.4	2.52	26.7	2.53	25.2	2.71	23.2	2.68
	20.0	19.0	36.0	2.71	35.4	2.67	34.6	2.63	33.0	2.61	31.4	2.59	30.0	2.58	28.8	2.76	26.5	2.71
	25.0	23.0	42.5	2.87	41.4	2.83	40.0	2.76	38.2	2.73	36.3	2.69	35.4	2.66	34.8	2.85	32.0	2.76
	30.0	28.0	49.0	3.04	47.5	2.99	45.5	2.90	43.4	2.85	41.3	2.80	40.9	2.75	40.8	2.93	37.5	2.82
	35.0	32.0	55.4	3.21	53.5	3.14	50.6	3.04	48.2	2.98	45.9	2.91	43.2	2.83	40.8	2.75	37.5	2.64
	40.0	36.0	55.4	2.91	53.5	2.87	50.6	2.80	48.2	2.75	45.9	2.71	43.2	2.64	40.8	2.56	37.5	2.47
	45.0	41.0	55.4	2.62	53.5	2.60	50.6	2.56	48.2	2.53	45.9	2.50	43.2	2.44	40.8	2.37	37.5	2.29
	47.0	43.0	55.4	2.52	53.5	2.50	50.6	2.46	48.2	2.43	**45.9**	**2.40**	43.2	2.34	40.8	2.28	37.5	2.20
	50.0	46.0	55.4	2.43	53.5	2.40	50.6	2.37	48.2	2.34	45.9	2.31	43.2	2.26	40.8	2.20	37.5	2.12
	55.0	51.0	55.4	2.28	53.5	2.26	50.6	2.22	48.2	2.20	45.9	2.17	43.2	2.12	40.8	2.06	37.5	1.99
	60.0	56.0	55.4	2.12	53.5	2.10	50.6	2.07	48.2	2.04	45.9	2.02	43.2	1.97	40.8	1.92	37.5	1.85

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM036GSS0

Table 45: ZRUM036GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	19.5	1.07	19.4	1.22	19.3	1.45	19.1	1.61	19.0	1.76	18.9	1.98	18.8	2.12	18.6	2.29
	-17.1	-17.5	20.3	1.21	20.6	1.34	20.3	1.54	20.1	1.66	19.8	1.81	19.5	2.03	19.3	2.14	18.9	2.30
	-12.6	-13.0	21.2	1.35	21.9	1.46	21.4	1.64	21.0	1.72	20.7	1.86	20.2	2.07	19.8	2.17	19.2	2.30
	-7.0	-7.6	22.3	1.52	23.5	1.61	22.8	1.75	22.2	1.79	21.7	1.92	21.0	2.13	20.4	2.21	19.6	2.31
	-4.0	-4.4	22.9	1.62	24.4	1.69	23.5	1.81	22.9	1.83	22.2	1.95	21.4	2.16	20.7	2.23	19.8	2.31
	0.0	-0.4	23.7	1.74	25.5	1.80	24.5	1.90	23.7	1.88	22.9	2.00	22.0	2.21	21.2	2.25	20.0	2.31
	5.0	4.5	24.6	1.90	26.9	1.94	25.7	2.00	24.8	1.95	23.8	2.05	22.7	2.26	21.7	2.28	20.4	2.32
	10.0	9.0	27.5	2.05	28.3	2.07	26.9	2.10	25.8	2.05	24.7	2.10	23.5	2.31	22.3	2.31	20.7	2.32
	17.0	15.0	31.4	2.27	30.3	2.26	28.6	2.25	27.3	2.21	26.0	2.18	24.5	2.38	23.0	2.36	21.1	2.32
	20.0	19.0	34.7	2.37	33.4	2.35	32.0	2.37	31.0	2.35	29.7	2.29	27.9	2.41	26.3	2.38	24.1	2.33
	25.0	23.0	40.0	2.54	38.6	2.49	37.7	2.57	37.1	2.52	35.8	2.48	33.7	2.47	31.8	2.41	29.1	2.33
	30.0	28.0	45.4	2.71	43.8	2.64	43.3	2.77	43.2	2.72	42.0	2.66	39.5	2.52	37.2	2.44	34.1	2.34
	35.0	32.0	50.8	2.88	48.9	2.79	46.2	2.65	44.1	2.59	42.0	2.53	39.5	2.39	37.2	2.31	34.1	2.21
	40.0	36.0	50.8	2.70	48.9	2.63	46.2	2.52	44.1	2.46	42.0	2.39	39.5	2.26	37.2	2.18	34.1	2.09
	45.0	41.0	50.8	2.53	48.9	2.48	46.2	2.40	44.1	2.33	42.0	2.25	39.5	2.12	37.2	2.06	34.1	1.96
	47.0	43.0	50.8	2.47	48.9	2.42	46.2	2.34	44.1	2.27	**42.0**	**2.20**	39.5	2.07	37.2	2.01	34.1	1.92
	50.0	46.0	50.8	2.38	48.9	2.33	46.2	2.25	44.1	2.19	42.0	2.12	39.5	2.00	37.2	1.93	34.1	1.85
	55.0	51.0	50.8	2.23	48.9	2.18	46.2	2.12	44.1	2.05	42.0	1.99	39.5	1.87	37.2	1.81	34.1	1.73
	60.0	56.0	50.8	2.07	48.9	2.03	46.2	1.97	44.1	1.91	42.0	1.85	39.5	1.74	37.2	1.69	34.1	1.61
90	-21.6	-22.0	19.4	1.37	19.3	1.46	19.2	1.58	19.1	1.74	18.9	1.91	18.8	2.02	18.7	2.13	18.6	2.28
	-17.1	-17.5	20.5	1.52	20.3	1.59	20.0	1.69	19.7	1.84	19.5	1.98	19.2	2.07	19.0	2.16	18.6	2.28
	-12.6	-13.0	21.6	1.66	21.3	1.72	20.8	1.81	20.4	1.93	20.1	2.05	19.6	2.12	19.2	2.19	18.7	2.28
	-7.0	-7.6	23.0	1.84	22.5	1.89	21.8	1.95	21.3	2.04	20.8	2.13	20.2	2.18	19.6	2.22	18.8	2.28
	-4.0	-4.4	23.7	1.94	23.1	1.97	22.3	2.02	21.7	2.10	21.2	2.18	20.4	2.21	19.8	2.24	18.9	2.28
	0.0	-0.4	24.7	2.07	24.0	2.09	23.1	2.12	22.4	2.18	21.7	2.24	20.8	2.25	20.0	2.26	18.9	2.28
	5.0	4.5	25.9	2.23	25.1	2.24	24.0	2.25	23.1	2.28	22.3	2.32	21.3	2.30	20.3	2.29	19.0	2.28
	10.0	9.0	27.1	2.39	26.2	2.38	24.8	2.38	23.9	2.39	22.9	2.39	21.8	2.35	20.6	2.32	19.1	2.28
	17.0	15.0	28.8	2.62	27.7	2.59	26.1	2.55	25.0	2.53	23.8	2.50	22.4	2.42	21.0	2.36	19.2	2.28
	20.0	19.0	32.9	2.71	31.7	2.68	29.8	2.63	28.5	2.59	27.2	2.55	25.6	2.46	24.0	2.38	22.0	2.28
	25.0	23.0	39.8	2.87	38.2	2.83	36.0	2.75	34.4	2.69	32.8	2.63	30.9	2.51	29.0	2.41	26.5	2.28
	30.0	28.0	46.6	3.03	44.8	2.97	42.2	2.88	40.3	2.79	38.5	2.70	36.2	2.56	34.0	2.44	31.1	2.28
	35.0	32.0	46.6	2.80	44.8	2.75	42.2	2.66	40.3	2.58	38.5	2.50	36.2	2.37	34.0	2.26	31.1	2.11
	40.0	36.0	46.6	2.57	44.8	2.52	42.2	2.44	40.3	2.37	38.5	2.30	36.2	2.18	34.0	2.07	31.1	1.93
	45.0	41.0	46.6	2.34	44.8	2.30	42.2	2.23	40.3	2.16	38.5	2.09	36.2	1.99	34.0	1.89	31.1	1.76
	47.0	43.0	46.6	2.25	44.8	2.21	42.2	2.14	40.3	2.08	**38.5**	**2.01**	36.2	1.91	34.0	1.82	31.1	1.69
	50.0	46.0	46.6	2.17	44.8	2.13	42.2	2.06	40.3	2.00	38.5	1.94	36.2	1.84	34.0	1.75	31.1	1.63
	55.0	51.0	46.6	2.04	44.8	2.00	42.2	1.93	40.3	1.88	38.5	1.82	36.2	1.73	34.0	1.64	31.1	1.53
	60.0	56.0	46.6	1.89	44.8	1.86	42.2	1.80	40.3	1.75	38.5	1.69	36.2	1.60	34.0	1.53	31.1	1.42
80	-21.6	-22.0	19.3	1.39	19.2	1.48	19.1	1.61	19.0	1.71	18.9	1.81	18.7	2.06	18.6	2.20	16.7	2.38
	-17.1	-17.5	20.1	1.52	19.9	1.60	19.6	1.71	19.4	1.79	19.2	1.87	18.9	2.09	18.6	2.20	16.8	2.36
	-12.6	-13.0	20.8	1.66	20.5	1.72	20.1	1.82	19.8	1.88	19.4	1.94	19.0	2.11	18.7	2.21	16.8	2.33
	-7.0	-7.6	21.8	1.83	21.3	1.87	20.7	1.94	20.3	1.98	19.8	2.02	19.2	2.15	18.7	2.21	16.9	2.30
	-4.0	-4.4	22.3	1.92	21.8	1.95	21.1	2.01	20.5	2.03	20.0	2.06	19.3	2.16	18.7	2.22	16.9	2.29
	0.0	-0.4	22.9	2.04	22.4	2.06	21.5	2.10	20.9	2.11	20.2	2.12	19.4	2.18	18.7	2.22	17.0	2.27
	5.0	4.5	23.8	2.19	23.1	2.20	22.1	2.21	21.3	2.20	20.6	2.19	19.6	2.21	18.8	2.23	17.1	2.24
	10.0	9.0	24.6	2.34	23.8	2.33	22.6	2.33	21.8	2.29	20.9	2.26	19.8	2.24	18.8	2.23	17.1	2.22
	17.0	15.0	25.8	2.55	24.8	2.52	23.4	2.49	22.4	2.42	21.3	2.36	20.0	2.28	18.8	2.24	17.2	2.18
	20.0	19.0	31.7	2.64	30.6	2.61	28.8	2.55	27.5	2.48	26.2	2.40	24.6	2.30	23.1	2.24	21.2	2.17
	25.0	23.0	41.7	2.79	40.1	2.74	37.8	2.67	36.1	2.57	34.4	2.47	32.3	2.33	30.4	2.25	27.8	2.14
	30.0	28.0	41.7	2.59	40.1	2.55	37.8	2.48	36.1	2.39	34.4	2.30	32.3	2.16	30.4	2.09	27.8	1.99
	35.0	32.0	41.7	2.39	40.1	2.35	37.8	2.28	36.1	2.20	34.4	2.12	32.3	2.00	30.4	1.93	27.8	1.84
	40.0	36.0	41.7	2.19	40.1	2.15	37.8	2.09	36.1	2.02	34.4	1.94	32.3	1.84	30.4	1.77	27.8	1.68
	45.0	41.0	41.7	2.00	40.1	1.96	37.8	1.90	36.1	1.83	34.4	1.77	32.3	1.68	30.4	1.61	27.8	1.53
	47.0	43.0	41.7	1.92	40.1	1.88	37.8	1.83	36.1	1.76	**34.4**	**1.70**	32.3	1.61	30.4	1.55	27.8	1.47
	50.0	46.0	41.7	1.85	40.1	1.81	37.8	1.76	36.1	1.70	34.4	1.64	32.3	1.55	30.4	1.49	27.8	1.42
	55.0	51.0	41.7	1.73	40.1	1.70	37.8	1.65	36.1	1.59	34.4	1.54	32.3	1.46	30.4	1.40	27.8	1.33
	60.0	56.0	41.7	1.61	40.1	1.58	37.8	1.54	36.1	1.48	34.4	1.43	32.3	1.36	30.4	1.30	27.8	1.24

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM036GSS0

MULTI V™ S WITH LGRED°

Table 46: ZRUM036GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-21.6	-22.0	18.1	1.49	18.0	1.53	17.9	1.59	17.8	1.75	17.7	1.92	16.6	2.14	15.6	2.28	14.3	2.46
	-17.1	-17.5	18.5	1.59	18.4	1.62	18.2	1.67	18.0	1.81	17.8	1.94	16.6	2.14	15.7	2.25	14.4	2.41
	-12.6	-13.0	19.0	1.70	18.7	1.72	18.4	1.75	18.1	1.86	17.8	1.97	16.7	2.13	15.7	2.23	14.5	2.36
	-7.0	-7.6	19.5	1.83	19.2	1.83	18.7	1.85	18.3	1.92	17.8	2.00	16.8	2.13	15.8	2.20	14.5	2.29
	-4.0	-4.4	19.8	1.90	19.4	1.90	18.8	1.90	18.3	1.96	17.9	2.02	16.8	2.12	15.8	2.18	14.6	2.26
	0.0	-0.4	20.2	1.99	19.7	1.98	19.0	1.97	18.5	2.01	17.9	2.05	16.9	2.12	15.9	2.16	14.6	2.22
	5.0	4.5	20.7	2.11	20.1	2.09	19.3	2.05	18.6	2.06	18.0	2.08	16.9	2.11	16.0	2.13	14.7	2.16
	10.0	9.0	21.2	2.22	20.5	2.19	19.5	2.14	18.8	2.12	18.0	2.11	17.0	2.11	16.0	2.11	14.7	2.11
	17.0	15.0	21.9	2.39	21.1	2.34	19.9	2.26	19.0	2.20	18.1	2.15	17.1	2.10	16.1	2.07	14.8	2.03
	20.0	19.0	26.9	2.46	25.9	2.40	24.5	2.31	23.4	2.24	22.2	2.17	21.0	2.10	19.8	2.05	18.2	2.00
	25.0	23.0	35.3	2.57	34.0	2.50	32.1	2.40	30.7	2.30	29.2	2.20	27.6	2.09	26.0	2.03	23.9	1.94
	30.0	28.0	35.3	2.37	34.0	2.30	32.1	2.21	30.7	2.12	29.2	2.03	27.6	1.92	26.0	1.86	23.9	1.77
	35.0	32.0	35.3	2.16	34.0	2.10	32.1	2.01	30.7	1.93	29.2	1.85	27.6	1.76	26.0	1.69	23.9	1.60
	40.0	36.0	35.3	1.95	34.0	1.90	32.1	1.82	30.7	1.75	29.2	1.68	27.6	1.59	26.0	1.52	23.9	1.43
	45.0	41.0	35.3	1.75	34.0	1.70	32.1	1.64	30.7	1.57	29.2	1.51	27.6	1.43	26.0	1.36	23.9	1.26
	47.0	43.0	35.3	1.68	34.0	1.64	32.1	1.57	30.7	1.51	**29.2**	**1.45**	27.6	1.37	26.0	1.30	23.9	1.21
	50.0	46.0	35.3	1.62	34.0	1.58	32.1	1.51	30.7	1.46	29.2	1.40	27.6	1.32	26.0	1.26	23.9	1.17
	55.0	51.0	35.3	1.52	34.0	1.48	32.1	1.42	30.7	1.37	29.2	1.31	27.6	1.24	26.0	1.18	23.9	1.09
	60.0	56.0	35.3	1.41	34.0	1.38	32.1	1.32	30.7	1.27	29.2	1.22	27.6	1.15	26.0	1.10	23.9	1.02
60	-21.6	-22.0	15.4	1.37	15.3	1.41	15.2	1.48	15.1	1.64	15.0	1.80	14.9	2.02	13.4	2.16	12.3	2.34
	-17.1	-17.5	15.8	1.46	15.6	1.50	15.4	1.54	15.3	1.68	15.1	1.82	14.9	2.01	13.4	2.12	12.4	2.27
	-12.6	-13.0	16.2	1.56	16.0	1.58	15.7	1.61	15.4	1.72	15.1	1.83	14.8	1.99	13.5	2.09	12.4	2.21
	-7.0	-7.6	16.6	1.68	16.4	1.68	15.9	1.69	15.6	1.77	15.2	1.85	14.8	1.97	13.5	2.04	12.5	2.13
	-4.0	-4.4	16.9	1.74	16.6	1.74	16.1	1.74	15.7	1.80	15.3	1.86	14.8	1.96	13.6	2.02	12.5	2.09
	0.0	-0.4	17.2	1.82	16.9	1.81	16.3	1.79	15.8	1.83	15.3	1.87	14.7	1.95	13.6	1.98	12.6	2.03
	5.0	4.5	17.7	1.93	17.2	1.90	16.5	1.87	15.9	1.88	15.4	1.89	14.7	1.93	13.7	1.94	12.6	1.96
	10.0	9.0	18.1	2.03	17.6	2.00	16.8	1.94	16.1	1.92	15.4	1.91	14.7	1.91	13.7	1.90	12.7	1.89
	17.0	15.0	18.7	2.18	18.1	2.12	17.1	2.04	16.3	1.99	15.5	1.93	14.6	1.89	13.8	1.85	12.7	1.79
	20.0	19.0	23.0	2.24	22.2	2.18	21.1	2.09	20.1	2.01	19.1	1.94	18.0	1.88	17.0	1.82	15.7	1.74
	25.0	23.0	30.2	2.35	29.2	2.27	27.6	2.16	26.3	2.06	25.0	1.96	23.6	1.86	22.3	1.78	20.6	1.67
	30.0	28.0	30.2	2.15	29.2	2.08	27.6	1.97	26.3	1.88	25.0	1.79	23.6	1.70	22.3	1.62	20.6	1.51
	35.0	32.0	30.2	1.96	29.2	1.89	27.6	1.79	26.3	1.70	25.0	1.62	23.6	1.53	22.3	1.46	20.6	1.35
	40.0	36.0	30.2	1.76	29.2	1.70	27.6	1.60	26.3	1.53	25.0	1.46	23.6	1.37	22.3	1.29	20.6	1.19
	45.0	41.0	30.2	1.58	29.2	1.51	27.6	1.42	26.3	1.36	25.0	1.30	23.6	1.21	22.3	1.14	20.6	1.04
	47.0	43.0	30.2	1.51	29.2	1.45	27.6	1.36	26.3	1.30	**25.0**	**1.25**	23.6	1.16	22.3	1.09	20.6	1.00
	50.0	46.0	30.2	1.46	29.2	1.40	27.6	1.31	26.3	1.26	25.0	1.20	23.6	1.12	22.3	1.05	20.6	0.96
	55.0	51.0	30.2	1.37	29.2	1.31	27.6	1.23	26.3	1.18	25.0	1.13	23.6	1.05	22.3	0.99	20.6	0.90
	60.0	56.0	30.2	1.27	29.2	1.22	27.6	1.14	26.3	1.10	25.0	1.05	23.6	0.98	22.3	0.92	20.6	0.84
50	-21.6	-22.0	16.4	1.17	16.4	1.22	16.3	1.28	16.2	1.44	16.1	1.61	15.9	1.83	15.6	1.97	15.2	2.14
	-17.1	-17.5	17.7	1.39	17.5	1.41	17.4	1.54	17.1	1.66	16.9	1.78	16.7	1.98	16.2	2.06	15.8	2.21
	-12.6	-13.0	19.0	1.61	18.6	1.61	18.5	1.79	18.1	1.87	17.7	1.95	17.4	2.13	16.8	2.16	16.3	2.28
	-7.0	-7.6	20.5	1.88	20.1	1.85	20.0	2.11	19.3	2.13	18.7	2.16	18.4	2.32	17.6	2.27	17.0	2.37
	-4.0	-4.4	21.4	2.02	20.8	1.98	20.7	2.28	20.0	2.28	19.3	2.27	19.0	2.41	18.0	2.34	17.0	2.31
	0.0	-0.4	22.5	2.21	21.8	2.15	21.7	2.51	20.9	2.47	20.0	2.42	19.7	2.55	18.5	2.42	17.0	2.25
	5.0	4.5	23.9	2.45	23.1	2.36	23.0	2.79	21.9	2.70	20.9	2.61	19.7	2.45	18.5	2.33	17.0	2.16
	10.0	9.0	25.3	2.69	24.4	2.58	23.0	2.41	21.9	2.33	20.9	2.25	19.7	2.11	18.5	2.00	17.0	1.86
	17.0	15.0	25.3	2.32	24.4	2.22	23.0	2.08	21.9	2.00	20.9	1.93	19.7	1.82	18.5	1.72	17.0	1.60
	20.0	19.0	25.3	2.20	24.4	2.11	23.0	1.97	21.9	1.90	20.9	1.83	19.7	1.72	18.5	1.63	17.0	1.52
	25.0	23.0	25.3	2.02	24.4	1.93	23.0	1.80	21.9	1.74	20.9	1.67	19.7	1.57	18.5	1.49	17.0	1.38
	30.0	28.0	25.3	1.83	24.4	1.75	23.0	1.64	21.9	1.57	20.9	1.51	19.7	1.42	18.5	1.35	17.0	1.25
	35.0	32.0	25.3	1.64	24.4	1.57	23.0	1.47	21.9	1.41	20.9	1.35	19.7	1.28	18.5	1.21	17.0	1.11
	40.0	36.0	25.3	1.45	24.4	1.39	23.0	1.30	21.9	1.25	20.9	1.20	19.7	1.13	18.5	1.07	17.0	0.98
	45.0	41.0	25.3	1.27	24.4	1.22	23.0	1.14	21.9	1.09	20.9	1.04	19.7	0.99	18.5	0.93	17.0	0.85
	47.0	43.0	25.3	1.22	24.4	1.17	23.0	1.10	21.9	1.05	**20.9**	**1.00**	19.7	0.95	18.5	0.89	17.0	0.82
	50.0	46.0	25.3	1.18	24.4	1.13	23.0	1.06	21.9	1.01	20.9	0.97	19.7	0.91	18.5	0.86	17.0	0.79
	55.0	51.0	25.3	1.10	24.4	1.06	23.0	0.99	21.9	0.95	20.9	0.91	19.7	0.86	18.5	0.81	17.0	0.74
	60.0	56.0	25.3	1.03	24.4	0.99	23.0	0.92	21.9	0.88	20.9	0.84	19.7	0.80	18.5	0.75	17.0	0.69

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70°F dry bulb (DB) and outdoor ambient conditions of 47°F dry bulb (DB) and 43°F wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM048GSS0

Table 47: ZRUM048GSS0 Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-21.6	-22.0	25.4	1.18	25.3	1.34	25.2	1.58	25.0	1.81	24.9	2.05	24.7	2.34	24.5	2.51	24.4	2.73
	-17.1	-17.5	27.3	1.49	27.2	1.63	27.0	1.84	26.8	2.04	26.6	2.23	26.3	2.53	26.1	2.67	25.9	2.87
	-12.6	-13.0	29.2	1.81	29.0	1.93	28.7	2.10	28.5	2.26	28.3	2.42	28.0	2.72	27.7	2.84	27.4	3.00
	-7.0	-7.6	31.6	2.20	31.3	2.29	31.0	2.42	30.7	2.54	30.4	2.66	30.1	2.95	29.7	3.04	29.3	3.17
	-4.0	-4.4	32.8	2.41	32.6	2.48	32.2	2.59	31.9	2.68	31.6	2.78	31.2	3.08	30.8	3.15	30.3	3.25
	0.0	-0.4	34.5	2.69	34.2	2.74	33.7	2.82	33.4	2.88	33.1	2.95	32.7	3.25	32.2	3.30	31.6	3.37
	5.0	4.5	36.6	3.05	36.2	3.07	35.7	3.10	35.4	3.13	35.0	3.16	34.6	3.45	34.0	3.48	33.3	3.52
	10.0	9.0	38.7	3.40	38.3	3.39	37.7	3.38	37.3	3.38	36.9	3.37	36.4	3.66	35.8	3.67	35.0	3.67
	17.0	15.0	41.6	3.89	41.2	3.85	40.5	3.78	40.0	3.72	39.6	3.66	39.0	3.96	38.3	3.92	37.3	3.88
	20.0	19.0	46.7	4.10	46.3	4.04	45.8	3.95	45.2	3.87	44.7	3.79	44.0	4.08	43.1	4.03	41.8	3.97
	25.0	23.0	55.2	4.45	54.9	4.37	54.5	4.24	53.8	4.12	53.2	4.00	52.2	4.29	51.1	4.22	49.3	4.12
	30.0	28.0	63.6	4.80	63.5	4.69	63.3	4.52	62.5	4.37	61.6	4.21	60.4	4.50	59.2	4.40	56.7	4.27
	35.0	32.0	72.1	5.15	72.1	5.01	72.1	4.81	71.1	4.61	70.1	4.42	65.8	4.23	61.9	4.13	56.7	4.00
	40.0	36.0	72.1	4.89	72.1	4.71	72.1	4.44	71.1	4.28	70.1	4.13	65.8	3.96	61.9	3.86	56.7	3.73
	45.0	41.0	72.1	4.29	72.1	4.20	72.1	4.06	71.1	3.95	70.1	3.83	65.8	3.67	61.9	3.58	56.7	3.46
	47.0	43.0	72.1	4.12	72.1	4.03	72.1	3.90	71.1	3.79	**70.1**	**3.68**	65.8	3.53	61.9	3.44	56.7	3.32
	50.0	46.0	72.1	3.97	72.1	3.89	72.1	3.76	71.1	3.65	70.1	3.55	65.8	3.40	61.9	3.31	56.7	3.20
	55.0	51.0	72.1	3.73	72.1	3.65	72.1	3.53	71.1	3.43	70.1	3.33	65.8	3.19	61.9	3.11	56.7	3.00
	60.0	56.0	72.1	3.46	72.1	3.39	72.1	3.28	71.1	3.19	70.1	3.09	65.8	2.97	61.9	2.89	56.7	2.79
120	-21.6	-22.0	25.3	1.45	25.2	1.57	25.0	1.76	24.8	1.92	24.7	2.07	24.5	2.18	24.4	2.20	24.2	2.23
	-17.1	-17.5	27.1	1.72	27.0	1.82	26.8	1.98	26.6	2.11	26.3	2.25	25.9	2.34	25.6	2.36	25.2	2.38
	-12.6	-13.0	29.0	1.98	28.8	2.07	28.6	2.20	28.3	2.31	28.0	2.43	27.4	2.50	26.9	2.51	26.1	2.53
	-7.0	-7.6	31.4	2.31	31.1	2.37	30.8	2.47	30.4	2.56	30.1	2.65	29.2	2.70	28.4	2.71	27.3	2.72
	-4.0	-4.4	32.6	2.49	32.4	2.54	32.0	2.61	31.6	2.69	31.2	2.76	30.2	2.81	29.2	2.81	28.0	2.82
	0.0	-0.4	34.3	2.73	34.0	2.76	33.6	2.81	33.1	2.87	32.6	2.92	31.5	2.96	30.4	2.95	28.8	2.95
	5.0	4.5	36.4	3.02	36.1	3.03	35.6	3.05	35.0	3.09	34.5	3.12	33.1	3.14	31.7	3.13	29.9	3.12
	10.0	9.0	38.5	3.31	38.1	3.31	37.6	3.30	37.0	3.31	36.3	3.31	34.7	3.32	33.1	3.30	31.0	3.28
	17.0	15.0	41.4	3.73	41.0	3.69	40.4	3.64	39.6	3.61	38.9	3.59	36.9	3.57	35.1	3.55	32.5	3.51
	20.0	19.0	46.5	3.90	46.1	3.86	45.5	3.79	44.4	3.75	43.3	3.71	41.1	3.68	38.9	3.65	35.9	3.61
	25.0	23.0	55.0	4.20	54.6	4.13	53.9	4.03	52.4	3.97	50.8	3.90	48.0	3.86	45.3	3.83	41.6	3.78
	30.0	28.0	63.5	4.49	63.0	4.41	62.3	4.27	60.3	4.19	58.3	4.10	55.0	4.04	51.7	4.00	47.4	3.95
	35.0	32.0	72.0	4.79	71.5	4.68	70.8	4.52	68.2	4.41	65.7	4.29	61.9	4.22	58.1	4.17	53.1	4.11
	40.0	36.0	72.0	4.41	71.5	4.32	70.8	4.19	68.2	4.10	65.7	4.00	61.9	3.94	58.1	3.88	53.1	3.82
	45.0	41.0	72.0	4.03	71.5	3.96	70.8	3.85	68.2	3.78	65.7	3.70	61.9	3.64	58.1	3.59	53.1	3.52
	47.0	43.0	72.0	3.87	71.5	3.81	70.8	3.70	68.2	3.63	**65.7**	**3.56**	61.9	3.50	58.1	3.45	53.1	3.38
	50.0	46.0	72.0	3.73	71.5	3.66	70.8	3.57	68.2	3.50	65.7	3.43	61.9	3.37	58.1	3.32	53.1	3.25
	55.0	51.0	72.0	3.50	71.5	3.44	70.8	3.35	68.2	3.28	65.7	3.22	61.9	3.17	58.1	3.12	53.1	3.05
	60.0	56.0	72.0	3.26	71.5	3.20	70.8	3.11	68.2	3.05	65.7	2.99	61.9	2.94	58.1	2.90	53.1	2.84
110	-21.6	-22.0	25.1	1.85	25.0	1.94	24.9	2.07	24.7	2.22	24.6	2.38	24.4	2.65	24.2	2.88	24.1	3.19
	-17.1	-17.5	26.9	2.06	26.8	2.14	26.6	2.25	26.2	2.38	25.9	2.51	25.5	2.76	25.1	2.99	24.7	3.25
	-12.6	-13.0	28.8	2.27	28.6	2.33	28.3	2.43	27.8	2.54	27.2	2.65	26.6	2.87	26.1	3.10	25.3	3.32
	-7.0	-7.6	31.1	2.54	30.8	2.58	30.5	2.65	29.7	2.73	28.9	2.82	28.0	3.00	27.2	3.24	26.1	3.41
	-4.0	-4.4	32.3	2.68	32.0	2.71	31.6	2.76	30.7	2.84	29.8	2.91	28.7	3.07	27.8	3.31	26.5	3.45
	0.0	-0.4	33.9	2.87	33.6	2.89	33.2	2.92	32.1	2.98	31.0	3.03	29.7	3.16	28.6	3.41	27.1	3.51
	5.0	4.5	35.9	3.10	35.6	3.11	35.1	3.11	33.8	3.15	32.5	3.19	31.0	3.28	29.6	3.53	27.8	3.59
	10.0	9.0	38.0	3.34	37.6	3.33	37.0	3.31	35.5	3.32	34.0	3.34	32.2	3.40	30.6	3.65	28.5	3.67
	17.0	15.0	40.8	3.67	40.4	3.64	39.7	3.58	37.9	3.57	36.1	3.55	33.9	3.56	32.0	3.82	29.5	3.77
	20.0	19.0	45.9	3.81	45.1	3.77	44.1	3.70	42.0	3.67	40.0	3.64	38.2	3.63	36.7	3.89	33.8	3.82
	25.0	23.0	54.4	4.05	53.0	3.99	51.3	3.90	48.9	3.85	46.5	3.80	45.4	3.75	44.6	4.01	41.0	3.89
	30.0	28.0	62.8	4.29	60.9	4.21	58.5	4.09	55.8	4.02	53.1	3.95	52.6	3.87	52.4	4.13	48.2	3.97
	35.0	32.0	71.3	4.52	68.8	4.43	65.0	4.29	62.0	4.19	59.0	4.10	55.5	3.99	52.4	3.87	48.2	3.72
	40.0	36.0	71.3	4.11	68.8	4.04	65.0	3.95	62.0	3.88	59.0	3.81	55.5	3.71	52.4	3.61	48.2	3.48
	45.0	41.0	71.3	3.70	68.8	3.66	65.0	3.60	62.0	3.56	59.0	3.52	55.5	3.43	52.4	3.34	48.2	3.23
	47.0	43.0	71.3	3.55	68.8	3.52	65.0	3.46	62.0	3.42	**59.0**	**3.38**	55.5	3.30	52.4	3.21	48.2	3.10
	50.0	46.0	71.3	3.42	68.8	3.39	65.0	3.34	62.0	3.30	59.0	3.26	55.5	3.18	52.4	3.10	48.2	2.98
	55.0	51.0	71.3	3.21	68.8	3.18	65.0	3.13	62.0	3.09	59.0	3.06	55.5	2.98	52.4	2.91	48.2	2.80
	60.0	56.0	71.3	2.99	68.8	2.96	65.0	2.91	62.0	2.88	59.0	2.84	55.5	2.77	52.4	2.70	48.2	2.61

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM048GSS0

MULTI V™ S WITH LGRED°

Table 48: ZRUM048GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	25.0	1.50	24.9	1.72	24.8	2.04	24.6	2.26	24.5	2.48	24.3	2.79	24.1	2.98	24.0	3.23
	-17.1	-17.5	26.1	1.69	26.5	1.88	26.1	2.17	25.8	2.34	25.5	2.55	25.1	2.86	24.7	3.02	24.3	3.24
	-12.6	-13.0	27.2	1.89	28.1	2.05	27.4	2.29	26.9	2.41	26.5	2.61	25.8	2.92	25.3	3.06	24.6	3.24
	-7.0	-7.6	28.5	2.12	30.0	2.25	29.1	2.45	28.4	2.51	27.7	2.69	26.8	3.00	26.1	3.11	25.0	3.25
	-4.0	-4.4	29.2	2.25	31.1	2.36	30.0	2.53	29.2	2.56	28.4	2.73	27.4	3.05	26.5	3.14	25.3	3.25
	0.0	-0.4	30.2	2.42	32.5	2.51	31.2	2.64	30.2	2.63	29.2	2.78	28.1	3.11	27.0	3.17	25.6	3.26
	5.0	4.5	31.4	2.63	34.2	2.69	32.7	2.78	31.5	2.71	30.3	2.85	28.9	3.18	27.7	3.22	25.9	3.26
	10.0	9.0	34.9	2.85	36.0	2.88	34.2	2.92	32.8	2.84	31.5	2.92	29.8	3.25	28.3	3.26	26.3	3.27
	17.0	15.0	39.9	3.14	38.5	3.13	36.3	3.11	34.6	3.07	33.0	3.02	31.1	3.36	29.2	3.32	26.8	3.28
	20.0	19.0	44.1	3.30	42.5	3.26	40.7	3.30	39.5	3.28	37.8	3.19	35.6	3.40	33.5	3.35	30.8	3.28
	25.0	23.0	51.2	3.55	49.3	3.48	48.1	3.60	47.5	3.53	45.9	3.47	43.2	3.47	40.7	3.39	37.3	3.28
	30.0	28.0	58.3	3.80	56.1	3.71	55.6	3.91	55.5	3.83	54.0	3.75	50.8	3.55	47.9	3.44	43.9	3.29
	35.0	32.0	65.3	4.06	62.9	3.93	59.4	3.73	56.7	3.65	54.0	3.56	50.8	3.36	47.9	3.26	43.9	3.12
	40.0	36.0	65.3	3.81	62.9	3.71	59.4	3.56	56.7	3.46	54.0	3.37	50.8	3.18	47.9	3.08	43.9	2.94
	45.0	41.0	65.3	3.56	62.9	3.49	59.4	3.38	56.7	3.28	54.0	3.18	50.8	2.99	47.9	2.90	43.9	2.77
	47.0	43.0	65.3	3.48	62.9	3.40	59.4	3.30	56.7	3.20	**54.0**	**3.10**	50.8	2.92	47.9	2.83	43.9	2.70
	50.0	46.0	65.3	3.35	62.9	3.28	59.4	3.18	56.7	3.08	54.0	2.99	50.8	2.81	47.9	2.72	43.9	2.60
	55.0	51.0	65.3	3.14	62.9	3.08	59.4	2.98	56.7	2.89	54.0	2.80	50.8	2.64	47.9	2.56	43.9	2.44
	60.0	56.0	65.3	2.92	62.9	2.86	59.4	2.77	56.7	2.69	54.0	2.61	50.8	2.46	47.9	2.38	43.9	2.27
90	-21.6	-22.0	24.9	1.94	24.8	2.05	24.7	2.23	24.5	2.46	24.4	2.69	24.2	2.85	24.0	3.00	23.9	3.21
	-17.1	-17.5	26.3	2.14	26.0	2.24	25.6	2.39	25.3	2.59	25.0	2.79	24.7	2.92	24.4	3.04	23.9	3.21
	-12.6	-13.0	27.6	2.34	27.2	2.43	26.6	2.55	26.2	2.72	25.7	2.89	25.2	2.98	24.7	3.08	24.0	3.21
	-7.0	-7.6	29.3	2.60	28.7	2.66	27.9	2.74	27.2	2.88	26.6	3.01	25.8	3.07	25.0	3.13	24.1	3.21
	-4.0	-4.4	30.2	2.73	29.6	2.78	28.5	2.85	27.8	2.96	27.0	3.07	26.1	3.11	25.3	3.15	24.1	3.21
	0.0	-0.4	31.5	2.92	30.6	2.95	29.4	2.99	28.5	3.08	27.6	3.16	26.6	3.17	25.5	3.19	24.2	3.21
	5.0	4.5	33.0	3.14	32.0	3.15	30.5	3.17	29.4	3.22	28.4	3.27	27.1	3.24	25.9	3.23	24.2	3.21
	10.0	9.0	34.5	3.37	33.3	3.36	31.6	3.35	30.4	3.36	29.2	3.37	27.7	3.31	26.2	3.27	24.3	3.21
	17.0	15.0	36.6	3.69	35.2	3.65	33.1	3.60	31.7	3.56	30.2	3.53	28.4	3.42	26.7	3.33	24.4	3.21
	20.0	19.0	42.0	3.82	40.4	3.77	38.0	3.70	36.3	3.65	34.7	3.59	32.6	3.46	30.6	3.35	28.0	3.21
	25.0	23.0	50.9	4.05	49.0	3.98	46.1	3.88	44.1	3.79	42.1	3.70	39.6	3.53	37.2	3.40	34.0	3.21
	30.0	28.0	59.9	4.27	57.6	4.19	54.2	4.06	51.8	3.93	49.5	3.81	46.5	3.61	43.7	3.44	39.9	3.21
	35.0	32.0	59.9	3.95	57.6	3.87	54.2	3.75	51.8	3.64	49.5	3.52	46.5	3.34	43.7	3.18	39.9	2.97
	40.0	36.0	59.9	3.63	57.6	3.55	54.2	3.45	51.8	3.34	49.5	3.24	46.5	3.07	43.7	2.92	39.9	2.73
	45.0	41.0	59.9	3.30	57.6	3.24	54.2	3.14	51.8	3.04	49.5	2.95	46.5	2.80	43.7	2.66	39.9	2.48
	47.0	43.0	59.9	3.18	57.6	3.11	54.2	3.02	51.8	2.93	**49.5**	**2.83**	46.5	2.69	43.7	2.56	39.9	2.38
	50.0	46.0	59.9	3.06	57.6	3.00	54.2	2.90	51.8	2.82	49.5	2.73	46.5	2.59	43.7	2.46	39.9	2.30
	55.0	51.0	59.9	2.87	57.6	2.81	54.2	2.73	51.8	2.64	49.5	2.56	46.5	2.43	43.7	2.31	39.9	2.16
	60.0	56.0	59.9	2.67	57.6	2.62	54.2	2.54	51.8	2.46	49.5	2.38	46.5	2.26	43.7	2.15	39.9	2.00
80	-21.6	-22.0	24.8	1.95	24.7	2.08	24.6	2.27	24.4	2.41	24.3	2.55	24.1	2.91	23.2	3.10	21.2	3.35
	-17.1	-17.5	25.7	2.14	25.5	2.25	25.2	2.42	24.9	2.53	24.6	2.64	24.2	2.94	23.2	3.10	21.3	3.32
	-12.6	-13.0	26.7	2.34	26.3	2.43	25.8	2.56	25.3	2.64	24.9	2.73	24.4	2.98	23.3	3.11	21.4	3.29
	-7.0	-7.6	27.8	2.57	27.3	2.64	26.5	2.74	25.9	2.79	25.3	2.84	24.6	3.02	23.4	3.12	21.5	3.25
	-4.0	-4.4	28.4	2.70	27.8	2.75	26.9	2.83	26.2	2.87	25.5	2.90	24.7	3.05	23.5	3.12	21.5	3.23
	0.0	-0.4	29.2	2.87	28.5	2.91	27.4	2.96	26.6	2.97	25.8	2.98	24.8	3.08	23.6	3.13	21.6	3.20
	5.0	4.5	30.3	3.08	29.4	3.10	28.1	3.12	27.2	3.10	26.2	3.08	25.0	3.12	23.7	3.14	21.7	3.16
	10.0	9.0	31.3	3.30	30.3	3.29	28.8	3.28	27.7	3.23	26.6	3.18	25.1	3.16	23.7	3.14	21.7	3.13
	17.0	15.0	32.7	3.59	31.5	3.56	29.7	3.50	28.4	3.41	27.1	3.32	25.4	3.21	23.9	3.16	21.9	3.08
	20.0	19.0	40.6	3.72	39.1	3.67	36.8	3.60	35.2	3.49	33.5	3.38	31.4	3.24	29.6	3.16	27.1	3.06
	25.0	23.0	53.6	3.93	51.6	3.86	48.6	3.76	46.5	3.62	44.3	3.49	41.5	3.28	39.1	3.17	35.8	3.02
	30.0	28.0	53.6	3.65	51.6	3.59	48.6	3.49	46.5	3.36	44.3	3.24	41.5	3.05	39.1	2.94	35.8	2.80
	35.0	32.0	53.6	3.37	51.6	3.31	48.6	3.22	46.5	3.10	44.3	2.99	41.5	2.82	39.1	2.72	35.8	2.59
	40.0	36.0	53.6	3.09	51.6	3.03	48.6	2.95	46.5	2.84	44.3	2.74	41.5	2.59	39.1	2.50	35.8	2.37
	45.0	41.0	53.6	2.81	51.6	2.76	48.6	2.68	46.5	2.58	44.3	2.49	41.5	2.37	39.1	2.28	35.8	2.15
	47.0	43.0	53.6	2.70	51.6	2.65	48.6	2.57	46.5	2.48	**44.3**	**2.39**	41.5	2.27	39.1	2.19	35.8	2.07
	50.0	46.0	53.6	2.60	51.6	2.55	48.6	2.48	46.5	2.39	44.3	2.30	41.5	2.19	39.1	2.11	35.8	1.99
	55.0	51.0	53.6	2.44	51.6	2.40	48.6	2.33	46.5	2.24	44.3	2.16	41.5	2.06	39.1	1.98	35.8	1.87
	60.0	56.0	53.6	2.27	51.6	2.23	48.6	2.16	46.5	2.09	44.3	2.01	41.5	1.91	39.1	1.84	35.8	1.74

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Table 49: ZRUM048GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-21.6	-22.0	23.0	2.09	22.9	2.15	22.8	2.25	22.6	2.47	22.5	2.70	21.0	3.02	19.8	3.21	18.2	3.46
	-17.1	-17.5	23.5	2.24	23.3	2.29	23.0	2.35	22.8	2.55	22.5	2.74	21.1	3.01	19.9	3.17	18.3	3.39
	-12.6	-13.0	24.1	2.39	23.8	2.42	23.3	2.46	23.0	2.62	22.6	2.78	21.2	3.00	20.0	3.14	18.3	3.32
	-7.0	-7.6	24.8	2.57	24.3	2.58	23.7	2.60	23.2	2.71	22.7	2.83	21.3	2.99	20.1	3.10	18.4	3.23
	-4.0	-4.4	25.2	2.67	24.6	2.67	23.9	2.67	23.3	2.76	22.7	2.85	21.3	2.99	20.1	3.07	18.5	3.19
	0.0	-0.4	25.6	2.80	25.0	2.79	24.1	2.77	23.4	2.83	22.7	2.88	21.4	2.98	20.2	3.04	18.5	3.12
	5.0	4.5	26.3	2.97	25.5	2.94	24.5	2.89	23.6	2.91	22.8	2.93	21.5	2.98	20.2	3.01	18.6	3.05
	10.0	9.0	26.9	3.13	26.0	3.09	24.8	3.01	23.8	2.99	22.9	2.97	21.6	2.97	20.3	2.97	18.7	2.97
	17.0	15.0	27.7	3.36	26.7	3.29	25.2	3.18	24.1	3.11	22.9	3.03	21.7	2.96	20.4	2.92	18.8	2.86
	20.0	19.0	34.4	3.46	33.1	3.38	31.3	3.26	29.8	3.16	28.4	3.06	26.9	2.95	25.3	2.89	23.3	2.81
	25.0	23.0	45.4	3.63	43.8	3.53	41.3	3.38	39.4	3.24	37.5	3.10	35.5	2.95	33.4	2.86	30.7	2.74
	30.0	28.0	45.4	3.33	43.8	3.24	41.3	3.11	39.4	2.98	37.5	2.85	35.5	2.71	33.4	2.62	30.7	2.49
	35.0	32.0	45.4	3.04	43.8	2.96	41.3	2.84	39.4	2.72	37.5	2.61	35.5	2.48	33.4	2.38	30.7	2.25
	40.0	36.0	45.4	2.75	43.8	2.68	41.3	2.57	39.4	2.47	37.5	2.37	35.5	2.24	33.4	2.14	30.7	2.01
	45.0	41.0	45.4	2.47	43.8	2.40	41.3	2.30	39.4	2.22	37.5	2.13	35.5	2.01	33.4	1.91	30.7	1.77
	47.0	43.0	45.4	2.37	43.8	2.31	41.3	2.21	39.4	2.13	**37.5**	**2.04**	35.5	1.94	33.4	1.84	30.7	1.71
	50.0	46.0	45.4	2.28	43.8	2.22	41.3	2.13	39.4	2.05	37.5	1.97	35.5	1.86	33.4	1.77	30.7	1.64
	55.0	51.0	45.4	2.14	43.8	2.09	41.3	2.00	39.4	1.92	37.5	1.85	35.5	1.75	33.4	1.66	30.7	1.54
	60.0	56.0	45.4	1.99	43.8	1.94	41.3	1.86	39.4	1.79	37.5	1.72	35.5	1.63	33.4	1.54	30.7	1.43
60	-21.6	-22.0	19.5	1.93	19.4	1.99	19.3	2.08	19.2	2.31	19.1	2.54	18.9	2.85	17.0	3.04	15.7	3.30
	-17.1	-17.5	20.0	2.06	19.9	2.11	19.6	2.17	19.4	2.37	19.2	2.56	18.9	2.83	17.0	2.99	15.7	3.20
	-12.6	-13.0	20.5	2.19	20.3	2.22	19.9	2.27	19.6	2.42	19.2	2.58	18.8	2.81	17.1	2.94	15.8	3.11
	-7.0	-7.6	21.1	2.36	20.8	2.37	20.2	2.38	19.8	2.49	19.3	2.61	18.8	2.78	17.2	2.88	15.9	3.00
	-4.0	-4.4	21.5	2.45	21.0	2.45	20.4	2.45	19.9	2.53	19.4	2.62	18.7	2.77	17.2	2.84	15.9	2.94
	0.0	-0.4	21.9	2.57	21.4	2.55	20.7	2.53	20.0	2.58	19.4	2.64	18.7	2.75	17.3	2.80	15.9	2.86
	5.0	4.5	22.4	2.72	21.9	2.68	21.0	2.63	20.2	2.65	19.5	2.66	18.7	2.72	17.3	2.74	16.0	2.76
	10.0	9.0	23.0	2.86	22.3	2.81	21.3	2.74	20.4	2.71	19.6	2.69	18.6	2.70	17.4	2.68	16.1	2.66
	17.0	15.0	23.8	3.07	22.9	2.99	21.7	2.88	20.7	2.80	19.7	2.72	18.5	2.66	17.5	2.60	16.2	2.52
	20.0	19.0	29.4	3.16	28.4	3.07	26.9	2.94	25.6	2.84	24.4	2.73	22.9	2.65	21.7	2.57	20.0	2.46
	25.0	23.0	38.9	3.31	37.5	3.20	35.5	3.05	33.9	2.90	32.2	2.76	30.3	2.62	28.7	2.51	26.4	2.35
	30.0	28.0	38.9	3.03	37.5	2.93	35.5	2.78	33.9	2.65	32.2	2.52	30.3	2.39	28.7	2.28	26.4	2.13
	35.0	32.0	38.9	2.76	37.5	2.66	35.5	2.52	33.9	2.40	32.2	2.29	30.3	2.16	28.7	2.05	26.4	1.90
	40.0	36.0	38.9	2.49	37.5	2.39	35.5	2.25	33.9	2.15	32.2	2.06	30.3	1.93	28.7	1.82	26.4	1.68
	45.0	41.0	38.9	2.22	37.5	2.13	35.5	2.00	33.9	1.91	32.2	1.83	30.3	1.71	28.7	1.60	26.4	1.47
	47.0	43.0	38.9	2.13	37.5	2.05	35.5	1.92	33.9	1.84	**32.2**	**1.76**	30.3	1.64	28.7	1.54	26.4	1.41
	50.0	46.0	38.9	2.05	37.5	1.97	35.5	1.85	33.9	1.77	32.2	1.69	30.3	1.58	28.7	1.48	26.4	1.36
	55.0	51.0	38.9	1.93	37.5	1.85	35.5	1.73	33.9	1.66	32.2	1.59	30.3	1.48	28.7	1.39	26.4	1.27
	60.0	56.0	38.9	1.79	37.5	1.72	35.5	1.61	33.9	1.54	32.2	1.48	30.3	1.38	28.7	1.30	26.4	1.18
50	-21.6	-22.0	21.1	1.66	21.0	1.72	20.9	1.81	20.8	2.03	20.7	2.26	20.4	2.58	20.0	2.77	19.6	3.02
	-17.1	-17.5	22.8	1.96	22.5	1.99	22.4	2.17	22.0	2.33	21.7	2.50	21.4	2.79	20.8	2.90	20.3	3.12
	-12.6	-13.0	24.4	2.26	24.0	2.26	23.8	2.53	23.3	2.63	22.8	2.74	22.4	3.00	21.6	3.04	21.0	3.22
	-7.0	-7.6	26.4	2.64	25.8	2.60	25.7	2.98	24.9	3.01	24.1	3.04	23.7	3.26	22.6	3.20	21.8	3.34
	-4.0	-4.4	27.5	2.85	26.8	2.78	26.6	3.22	25.7	3.21	24.8	3.20	24.4	3.40	23.1	3.29	21.8	3.26
	0.0	-0.4	28.9	3.12	28.1	3.03	27.9	3.54	26.8	3.47	25.7	3.41	25.3	3.59	23.8	3.41	21.8	3.18
	5.0	4.5	30.7	3.46	29.7	3.33	29.5	3.94	28.2	3.81	26.9	3.68	25.3	3.45	23.8	3.28	21.8	3.05
	10.0	9.0	32.5	3.80	31.3	3.64	29.5	3.39	28.2	3.28	26.9	3.16	25.3	2.97	23.8	2.82	21.8	2.62
	17.0	15.0	32.5	3.27	31.3	3.13	29.5	2.93	28.2	2.82	26.9	2.72	25.3	2.56	23.8	2.43	21.8	2.25
	20.0	19.0	32.5	3.11	31.3	2.98	29.5	2.78	28.2	2.68	26.9	2.58	25.3	2.43	23.8	2.30	21.8	2.14
	25.0	23.0	32.5	2.84	31.3	2.72	29.5	2.54	28.2	2.45	26.9	2.36	25.3	2.22	23.8	2.10	21.8	1.95
	30.0	28.0	32.5	2.57	31.3	2.47	29.5	2.31	28.2	2.22	26.9	2.13	25.3	2.01	23.8	1.90	21.8	1.76
	35.0	32.0	32.5	2.31	31.3	2.21	29.5	2.07	28.2	1.99	26.9	1.91	25.3	1.80	23.8	1.70	21.8	1.57
	40.0	36.0	32.5	2.05	31.3	1.96	29.5	1.84	28.2	1.76	26.9	1.69	25.3	1.59	23.8	1.50	21.8	1.38
	45.0	41.0	32.5	1.79	31.3	1.72	29.5	1.61	28.2	1.54	26.9	1.47	25.3	1.39	23.8	1.31	21.8	1.20
	47.0	43.0	32.5	1.72	31.3	1.65	29.5	1.55	28.2	1.48	**26.9**	**1.41**	25.3	1.34	23.8	1.26	21.8	1.16
	50.0	46.0	32.5	1.66	31.3	1.59	29.5	1.49	28.2	1.43	26.9	1.36	25.3	1.29	23.8	1.21	21.8	1.11
	55.0	51.0	32.5	1.56	31.3	1.49	29.5	1.40	28.2	1.34	26.9	1.28	25.3	1.21	23.8	1.14	21.8	1.05
	60.0	56.0	32.5	1.45	31.3	1.39	29.5	1.30	28.2	1.24	26.9	1.19	25.3	1.12	23.8	1.06	21.8	0.97

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70°F dry bulb (DB) and outdoor ambient conditions of 47°F dry bulb (DB) and 43°F wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM060GSS0

MULTI V™ S WITH LGRED°

Table 50: ZRUM060GSS0 Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
130	-21.6	-22.0	31.6	1.75	31.4	1.99	31.2	2.35	31.0	2.69	30.9	3.03	30.6	3.47	30.5	3.72	30.2	4.05
	-17.1	-17.5	33.3	2.22	33.1	2.42	32.9	2.73	32.7	3.02	32.4	3.31	32.1	3.75	31.9	3.97	31.6	4.25
	-12.6	-13.0	35.1	2.69	34.9	2.86	34.5	3.11	34.3	3.35	34.0	3.59	33.7	4.03	33.4	4.21	32.9	4.45
	-7.0	-7.6	37.3	3.27	37.0	3.40	36.6	3.59	36.3	3.76	36.0	3.94	35.6	4.38	35.2	4.52	34.6	4.70
	-4.0	-4.4	38.4	3.58	38.1	3.69	37.7	3.84	37.4	3.98	37.0	4.13	36.6	4.57	36.1	4.68	35.5	4.83
	0.0	-0.4	40.0	4.00	39.7	4.07	39.2	4.18	38.8	4.28	38.4	4.38	38.0	4.82	37.4	4.90	36.7	5.01
	5.0	4.5	42.0	4.52	41.6	4.55	41.0	4.60	40.6	4.64	40.2	4.69	39.7	5.13	39.1	5.17	38.2	5.23
	10.0	9.0	43.9	5.04	43.5	5.03	42.8	5.02	42.4	5.01	41.9	5.00	41.4	5.44	40.7	5.44	39.7	5.45
	17.0	15.0	46.7	5.77	46.2	5.71	45.4	5.61	44.9	5.52	44.4	5.43	43.8	5.87	42.9	5.82	41.8	5.76
	20.0	19.0	53.8	6.08	53.4	6.00	52.7	5.87	52.1	5.74	51.5	5.62	50.7	6.06	49.7	5.99	48.4	5.89
	25.0	23.0	65.7	6.60	65.4	6.48	65.0	6.29	64.1	6.11	63.3	5.93	62.1	6.37	60.9	6.26	59.4	6.11
	30.0	28.0	77.6	7.12	77.4	6.96	77.2	6.71	76.2	6.48	75.1	6.24	73.6	6.68	72.2	6.53	70.4	6.33
	35.0	32.0	89.5	7.65	89.5	7.44	89.5	7.14	88.2	6.84	87.0	6.55	81.7	6.28	76.9	6.13	70.4	5.93
	40.0	36.0	89.5	7.26	89.5	6.99	89.5	6.58	88.2	6.35	87.0	6.12	81.7	5.87	76.9	5.73	70.4	5.54
	45.0	41.0	89.5	6.36	89.5	6.23	89.5	6.03	88.2	5.86	87.0	5.68	81.7	5.45	76.9	5.31	70.4	5.13
	47.0	43.0	89.5	6.12	89.5	5.99	89.5	5.79	88.2	5.63	**87.0**	**5.46**	81.7	5.24	76.9	5.11	70.4	4.93
	50.0	46.0	89.5	5.89	89.5	5.77	89.5	5.58	88.2	5.42	87.0	5.26	81.7	5.04	76.9	4.92	70.4	4.75
	55.0	51.0	89.5	5.53	89.5	5.41	89.5	5.24	88.2	5.09	87.0	4.94	81.7	4.73	76.9	4.61	70.4	4.46
	60.0	56.0	89.5	5.14	89.5	5.03	89.5	4.87	88.2	4.73	87.0	4.59	81.7	4.40	76.9	4.29	70.4	4.14
120	-21.6	-22.0	31.3	2.15	31.2	2.33	31.0	2.61	30.8	2.84	30.6	3.08	30.4	3.23	30.2	3.26	30.0	3.31
	-17.1	-17.5	33.1	2.55	32.9	2.70	32.7	2.93	32.4	3.14	32.1	3.34	31.7	3.47	31.3	3.50	30.8	3.53
	-12.6	-13.0	34.8	2.94	34.6	3.07	34.4	3.26	34.0	3.43	33.7	3.60	33.0	3.71	32.4	3.73	31.5	3.75
	-7.0	-7.6	37.0	3.43	36.8	3.52	36.4	3.66	36.0	3.80	35.5	3.93	34.6	4.01	33.7	4.02	32.4	4.03
	-4.0	-4.4	38.2	3.69	37.9	3.77	37.5	3.88	37.0	3.99	36.5	4.10	35.4	4.17	34.4	4.17	32.9	4.18
	0.0	-0.4	39.8	4.04	39.5	4.09	39.0	4.17	38.5	4.25	37.9	4.34	36.6	4.39	35.3	4.38	33.6	4.38
	5.0	4.5	41.7	4.48	41.4	4.50	40.9	4.53	40.2	4.58	39.5	4.63	38.0	4.65	36.5	4.64	34.4	4.62
	10.0	9.0	43.7	4.92	43.3	4.91	42.7	4.89	42.0	4.91	41.2	4.92	39.4	4.92	37.7	4.90	35.2	4.87
	17.0	15.0	46.4	5.53	46.0	5.48	45.3	5.40	44.5	5.36	43.6	5.32	41.4	5.30	39.3	5.26	36.4	5.22
	20.0	19.0	53.6	5.79	53.1	5.72	52.4	5.62	51.2	5.56	49.9	5.50	47.3	5.46	44.8	5.42	41.3	5.36
	25.0	23.0	65.5	6.23	65.0	6.13	64.2	5.98	62.3	5.89	60.4	5.79	57.2	5.73	53.9	5.68	49.5	5.61
	30.0	28.0	77.4	6.67	76.9	6.54	76.0	6.34	73.5	6.21	71.0	6.08	67.0	5.99	63.0	5.94	57.7	5.86
	35.0	32.0	89.4	7.11	88.7	6.95	87.8	6.71	84.7	6.54	81.5	6.37	76.8	6.26	72.1	6.19	65.9	6.10
	40.0	36.0	89.4	6.55	88.7	6.41	87.8	6.21	84.7	6.08	81.5	5.94	76.8	5.84	72.1	5.76	65.9	5.66
	45.0	41.0	89.4	5.98	88.7	5.88	87.8	5.72	84.7	5.61	81.5	5.50	76.8	5.41	72.1	5.33	65.9	5.22
	47.0	43.0	89.4	5.75	88.7	5.65	87.8	5.49	84.7	5.39	**81.5**	**5.28**	76.8	5.20	72.1	5.12	65.9	5.01
	50.0	46.0	89.4	5.54	88.7	5.44	87.8	5.29	84.7	5.19	81.5	5.09	76.8	5.00	72.1	4.93	65.9	4.83
	55.0	51.0	89.4	5.20	88.7	5.10	87.8	4.97	84.7	4.87	81.5	4.77	76.8	4.70	72.1	4.63	65.9	4.53
	60.0	56.0	89.4	4.83	88.7	4.75	87.8	4.62	84.7	4.53	81.5	4.44	76.8	4.37	72.1	4.30	65.9	4.22
110	-21.6	-22.0	31.2	2.74	31.0	2.88	30.8	3.08	30.7	3.30	30.5	3.52	30.2	3.94	30.1	4.28	29.9	4.73
	-17.1	-17.5	32.9	3.06	32.7	3.17	32.4	3.34	32.0	3.53	31.6	3.73	31.1	4.10	30.8	4.44	30.2	4.83
	-12.6	-13.0	34.6	3.37	34.4	3.46	34.0	3.60	33.4	3.77	32.8	3.93	32.1	4.25	31.4	4.60	30.6	4.93
	-7.0	-7.6	36.7	3.76	36.4	3.83	36.0	3.93	35.1	4.05	34.2	4.18	33.2	4.45	32.3	4.80	31.1	5.06
	-4.0	-4.4	37.8	3.97	37.5	4.02	37.1	4.10	36.0	4.21	35.0	4.32	33.8	4.55	32.7	4.91	31.3	5.12
	0.0	-0.4	39.3	4.26	39.0	4.29	38.5	4.33	37.3	4.42	36.0	4.50	34.6	4.69	33.3	5.06	31.6	5.21
	5.0	4.5	41.2	4.61	40.8	4.61	40.3	4.62	38.8	4.67	37.3	4.73	35.6	4.87	34.1	5.24	32.0	5.33
	10.0	9.0	43.1	4.96	42.7	4.94	42.1	4.91	40.3	4.93	38.6	4.95	36.6	5.04	34.8	5.42	32.5	5.44
	17.0	15.0	45.8	5.45	45.3	5.40	44.5	5.32	42.5	5.29	40.4	5.27	38.1	5.29	35.9	5.67	33.0	5.60
	20.0	19.0	52.9	5.66	52.0	5.59	51.0	5.49	48.7	5.45	46.3	5.41	44.3	5.39	42.6	5.78	39.2	5.66
	25.0	23.0	64.7	6.01	63.1	5.92	61.8	5.78	58.9	5.71	56.1	5.63	54.8	5.57	53.8	5.96	49.5	5.78
	30.0	28.0	76.6	6.36	74.2	6.24	72.6	6.07	69.2	5.96	65.9	5.86	65.2	5.74	65.0	6.14	59.8	5.89
	35.0	32.0	88.4	6.71	85.3	6.57	80.6	6.36	76.9	6.22	73.2	6.08	68.9	5.92	65.0	5.75	59.8	5.53
	40.0	36.0	88.4	6.09	85.3	6.00	80.6	5.86	76.9	5.76	73.2	5.66	68.9	5.51	65.0	5.36	59.8	5.16
	45.0	41.0	88.4	5.48	85.3	5.43	80.6	5.35	76.9	5.29	73.2	5.22	68.9	5.10	65.0	4.96	59.8	4.79
	47.0	43.0	88.4	5.27	85.3	5.22	80.6	5.14	76.9	5.08	**73.2**	**5.02**	68.9	4.90	65.0	4.77	59.8	4.60
	50.0	46.0	88.4	5.08	85.3	5.03	80.6	4.95	76.9	4.89	73.2	4.84	68.9	4.72	65.0	4.59	59.8	4.43
	55.0	51.0	88.4	4.76	85.3	4.72	80.6	4.65	76.9	4.59	73.2	4.54	68.9	4.43	65.0	4.31	59.8	4.16
	60.0	56.0	88.4	4.43	85.3	4.39	80.6	4.32	76.9	4.27	73.2	4.22	68.9	4.12	65.0	4.01	59.8	3.87

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM060GSS0

Table 51: ZRUM060GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	31.0	2.23	30.9	2.55	30.7	3.03	30.5	3.36	30.3	3.68	30.1	4.14	29.9	4.42	29.7	4.80
	-17.1	-17.5	31.9	2.48	32.3	2.76	31.9	3.18	31.5	3.44	31.1	3.74	30.7	4.24	30.3	4.48	29.8	4.81
	-12.6	-13.0	32.7	2.72	33.8	2.96	33.0	3.33	32.5	3.51	31.9	3.80	31.2	4.34	30.6	4.54	29.8	4.81
	-7.0	-7.6	33.8	3.03	35.5	3.22	34.5	3.51	33.7	3.61	32.9	3.87	31.9	4.46	31.0	4.61	29.9	4.82
	-4.0	-4.4	34.4	3.19	36.5	3.36	35.3	3.61	34.3	3.66	33.4	3.91	32.3	4.52	31.2	4.65	29.9	4.83
	0.0	-0.4	35.1	3.41	37.7	3.54	36.3	3.74	35.2	3.73	34.1	3.96	32.7	4.61	31.5	4.71	29.9	4.83
	5.0	4.5	36.1	3.69	39.3	3.77	37.6	3.91	36.3	3.82	34.9	4.02	33.4	4.72	31.9	4.77	30.0	4.84
	10.0	9.0	39.7	3.96	40.9	4.00	38.9	4.07	37.3	3.97	35.8	4.08	34.0	4.83	32.3	4.84	30.0	4.85
	17.0	15.0	44.7	4.34	43.1	4.32	40.7	4.30	38.8	4.24	37.0	4.17	34.8	4.98	32.8	4.93	30.1	4.86
	20.0	19.0	50.8	4.62	48.9	4.57	46.9	4.65	45.8	4.62	43.9	4.49	41.3	5.05	38.9	4.97	35.7	4.87
	25.0	23.0	60.9	5.09	58.7	4.99	57.3	5.22	57.3	5.12	55.5	5.03	52.2	5.16	49.1	5.04	45.1	4.87
	30.0	28.0	70.9	5.55	68.4	5.41	67.7	5.80	68.9	5.68	67.0	5.57	63.1	5.27	59.4	5.10	54.4	4.88
	35.0	32.0	81.0	6.02	78.1	5.82	73.6	5.54	70.3	5.41	67.0	5.28	63.1	4.99	59.4	4.83	54.4	4.62
	40.0	36.0	81.0	5.65	78.1	5.50	73.6	5.28	70.3	5.14	67.0	5.00	63.1	4.72	59.4	4.57	54.4	4.37
	45.0	41.0	81.0	5.29	78.1	5.18	73.6	5.01	70.3	4.86	67.0	4.71	63.1	4.44	59.4	4.30	54.4	4.11
	47.0	43.0	81.0	5.16	78.1	5.05	73.6	4.89	70.3	4.75	**67.0**	**4.60**	63.1	4.34	59.4	4.20	54.4	4.01
	50.0	46.0	81.0	4.97	78.1	4.87	73.6	4.71	70.3	4.57	67.0	4.43	63.1	4.18	59.4	4.04	54.4	3.86
	55.0	51.0	81.0	4.66	78.1	4.57	73.6	4.42	70.3	4.29	67.0	4.16	63.1	3.92	59.4	3.79	54.4	3.62
	60.0	56.0	81.0	4.34	78.1	4.25	73.6	4.11	70.3	3.99	67.0	3.87	63.1	3.64	59.4	3.53	54.4	3.37
90	-21.6	-22.0	30.9	2.87	30.8	3.05	30.6	3.30	30.4	3.65	30.2	3.99	30.0	4.23	29.8	4.46	29.6	4.76
	-17.1	-17.5	32.1	3.18	31.8	3.32	31.4	3.54	31.0	3.84	30.7	4.14	30.2	4.33	29.8	4.51	29.4	4.76
	-12.6	-13.0	33.3	3.48	32.8	3.60	32.1	3.78	31.6	4.03	31.1	4.28	30.4	4.43	29.9	4.57	29.1	4.76
	-7.0	-7.6	34.7	3.86	34.1	3.94	33.1	4.07	32.3	4.27	31.6	4.46	30.7	4.55	29.9	4.64	28.8	4.76
	-4.0	-4.4	35.5	4.06	34.7	4.13	33.6	4.23	32.7	4.39	31.9	4.56	30.9	4.61	29.9	4.68	28.6	4.76
	0.0	-0.4	36.6	4.33	35.6	4.37	34.3	4.44	33.3	4.56	32.3	4.69	31.0	4.70	29.9	4.73	28.4	4.76
	5.0	4.5	37.9	4.66	36.8	4.68	35.1	4.71	33.9	4.78	32.7	4.85	31.3	4.81	29.9	4.79	28.1	4.76
	10.0	9.0	39.2	5.00	37.9	4.99	36.0	4.97	34.6	4.99	33.2	5.01	31.5	4.92	29.9	4.85	27.8	4.76
	17.0	15.0	41.0	5.47	39.5	5.42	37.1	5.34	35.5	5.28	33.9	5.23	31.9	5.07	29.9	4.94	27.4	4.77
	20.0	19.0	48.7	5.67	46.9	5.60	44.1	5.50	42.2	5.41	40.2	5.33	37.9	5.13	35.6	4.98	32.5	4.77
	25.0	23.0	61.5	6.01	59.2	5.91	55.7	5.76	53.2	5.62	50.8	5.49	47.8	5.24	44.9	5.04	41.0	4.77
	30.0	28.0	74.3	6.34	71.5	6.21	67.3	6.02	64.3	5.84	61.4	5.65	57.7	5.35	54.2	5.10	49.5	4.77
	35.0	32.0	74.3	5.86	71.5	5.74	67.3	5.57	64.3	5.40	61.4	5.23	57.7	4.95	54.2	4.72	49.5	4.41
	40.0	36.0	74.3	5.38	71.5	5.27	67.3	5.11	64.3	4.96	61.4	4.80	57.7	4.55	54.2	4.33	49.5	4.04
	45.0	41.0	74.3	4.90	71.5	4.80	67.3	4.66	64.3	4.52	61.4	4.38	57.7	4.15	54.2	3.95	49.5	3.68
	47.0	43.0	74.3	4.71	71.5	4.62	67.3	4.47	64.3	4.34	**61.4**	**4.21**	57.7	3.99	54.2	3.80	49.5	3.54
	50.0	46.0	74.3	4.54	71.5	4.45	67.3	4.31	64.3	4.18	61.4	4.05	57.7	3.84	54.2	3.66	49.5	3.41
	55.0	51.0	74.3	4.26	71.5	4.17	67.3	4.05	64.3	3.92	61.4	3.80	57.7	3.61	54.2	3.43	49.5	3.20
	60.0	56.0	74.3	3.96	71.5	3.88	67.3	3.76	64.3	3.65	61.4	3.54	57.7	3.35	54.2	3.19	49.5	2.97
80	-21.6	-22.0	30.8	2.90	30.7	3.09	30.5	3.37	30.3	3.57	30.1	3.78	27.6	4.31	26.0	4.60	23.8	4.97
	-17.1	-17.5	31.5	3.18	31.2	3.34	30.8	3.58	30.5	3.75	30.1	3.91	27.7	4.37	26.1	4.61	23.9	4.92
	-12.6	-13.0	32.2	3.47	31.8	3.60	31.1	3.80	30.6	3.92	30.2	4.05	27.8	4.42	26.2	4.62	23.9	4.88
	-7.0	-7.6	33.0	3.82	32.4	3.92	31.5	4.06	30.9	4.14	30.2	4.21	27.9	4.49	26.3	4.63	24.1	4.82
	-4.0	-4.4	33.5	4.01	32.8	4.09	31.8	4.20	31.0	4.25	30.2	4.30	28.0	4.52	26.3	4.64	24.1	4.79
	0.0	-0.4	34.1	4.26	33.3	4.31	32.1	4.39	31.2	4.41	30.2	4.42	28.1	4.57	26.4	4.64	24.2	4.75
	5.0	4.5	34.9	4.58	33.9	4.60	32.4	4.63	31.4	4.60	30.3	4.57	28.2	4.63	26.5	4.66	24.3	4.69
	10.0	9.0	35.6	4.89	34.5	4.88	32.8	4.87	31.6	4.80	30.3	4.72	28.3	4.69	26.6	4.67	24.4	4.64
	17.0	15.0	36.7	5.33	35.4	5.28	33.3	5.20	31.8	5.07	30.3	4.93	28.5	4.77	26.8	4.68	24.5	4.57
	20.0	19.0	47.9	5.52	46.1	5.45	43.5	5.34	41.5	5.18	39.6	5.02	37.1	4.80	34.9	4.69	32.0	4.54
	25.0	23.0	66.5	5.84	64.0	5.73	60.3	5.58	57.6	5.37	55.0	5.17	51.5	4.86	48.5	4.70	44.4	4.48
	30.0	28.0	66.5	5.42	64.0	5.32	60.3	5.18	57.6	4.99	55.0	4.80	51.5	4.53	48.5	4.37	44.4	4.16
	35.0	32.0	66.5	5.00	64.0	4.91	60.3	4.77	57.6	4.60	55.0	4.43	51.5	4.19	48.5	4.04	44.4	3.84
	40.0	36.0	66.5	4.59	64.0	4.50	60.3	4.37	57.6	4.22	55.0	4.06	51.5	3.85	48.5	3.71	44.4	3.52
	45.0	41.0	66.5	4.17	64.0	4.09	60.3	3.97	57.6	3.83	55.0	3.70	51.5	3.51	48.5	3.38	44.4	3.20
	47.0	43.0	66.5	4.01	64.0	3.93	60.3	3.82	57.6	3.68	**55.0**	**3.55**	51.5	3.37	48.5	3.24	44.4	3.07
	50.0	46.0	66.5	3.86	64.0	3.79	60.3	3.68	57.6	3.55	55.0	3.42	51.5	3.25	48.5	3.13	44.4	2.96
	55.0	51.0	66.5	3.62	64.0	3.55	60.3	3.45	57.6	3.33	55.0	3.21	51.5	3.05	48.5	2.93	44.4	2.78
	60.0	56.0	66.5	3.37	64.0	3.31	60.3	3.21	57.6	3.10	55.0	2.99	51.5	2.84	48.5	2.73	44.4	2.58

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

HEATING CAPACITY

ZRUM060GSS0

MULTI V™ S WITH LGRED°

Table 52: ZRUM060GSS0 Heating Capacities, continued.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
70	-21.6	-22.0	25.8	3.11	25.7	3.20	25.5	3.33	25.4	3.67	25.2	4.01	23.6	4.48	22.2	4.76	20.4	5.13
	-17.1	-17.5	26.4	3.33	26.2	3.39	25.8	3.49	25.6	3.78	25.3	4.06	23.7	4.47	22.3	4.71	20.5	5.03
	-12.6	-13.0	27.0	3.55	26.7	3.59	26.2	3.66	25.7	3.89	25.3	4.12	23.7	4.46	22.4	4.66	20.6	4.93
	-7.0	-7.6	27.8	3.82	27.3	3.83	26.6	3.86	26.0	4.02	25.4	4.19	23.9	4.44	22.5	4.60	20.7	4.80
	-4.0	-4.4	28.2	3.97	27.6	3.97	26.8	3.97	26.1	4.10	25.4	4.23	23.9	4.44	22.5	4.56	20.7	4.73
	0.0	-0.4	28.8	4.16	28.1	4.14	27.1	4.11	26.3	4.20	25.5	4.28	24.0	4.43	22.6	4.52	20.8	4.64
	5.0	4.5	29.4	4.41	28.6	4.36	27.4	4.29	26.5	4.32	25.6	4.34	24.1	4.42	22.7	4.46	20.9	4.52
	10.0	9.0	30.1	4.65	29.2	4.58	27.8	4.47	26.7	4.44	25.6	4.41	24.2	4.41	22.8	4.41	20.9	4.41
	17.0	15.0	31.1	4.99	30.0	4.88	28.3	4.72	27.0	4.61	25.7	4.50	24.3	4.39	22.9	4.33	21.1	4.25
	20.0	19.0	40.6	5.14	39.1	5.02	36.9	4.83	35.2	4.68	33.5	4.53	31.7	4.38	29.9	4.29	27.5	4.18
	25.0	23.0	56.3	5.38	54.3	5.23	51.3	5.01	48.9	4.80	46.6	4.60	44.0	4.37	41.5	4.24	38.1	4.06
	30.0	28.0	56.3	4.95	54.3	4.81	51.3	4.61	48.9	4.42	46.6	4.23	44.0	4.02	41.5	3.89	38.1	3.70
	35.0	32.0	56.3	4.52	54.3	4.39	51.3	4.21	48.9	4.04	46.6	3.87	44.0	3.68	41.5	3.53	38.1	3.34
	40.0	36.0	56.3	4.08	54.3	3.97	51.3	3.81	48.9	3.66	46.6	3.51	44.0	3.33	41.5	3.18	38.1	2.98
	45.0	41.0	56.3	3.66	54.3	3.56	51.3	3.42	48.9	3.29	46.6	3.16	44.0	2.99	41.5	2.84	38.1	2.63
	47.0	43.0	56.3	3.52	54.3	3.42	51.3	3.29	48.9	3.16	**46.6**	**3.03**	44.0	2.87	41.5	2.73	38.1	2.53
	50.0	46.0	56.3	3.39	54.3	3.30	51.3	3.17	48.9	3.04	46.6	2.92	44.0	2.77	41.5	2.63	38.1	2.44
	55.0	51.0	56.3	3.18	54.3	3.10	51.3	2.97	48.9	2.86	46.6	2.74	44.0	2.60	41.5	2.46	38.1	2.29
	60.0	56.0	56.3	2.96	54.3	2.88	51.3	2.76	48.9	2.66	46.6	2.55	44.0	2.41	41.5	2.29	38.1	2.13
60	-21.6	-22.0	21.9	2.86	21.8	2.95	21.7	3.09	21.5	3.43	21.4	3.76	21.2	4.23	19.0	4.51	17.6	4.89
	-17.1	-17.5	22.4	3.06	22.3	3.13	22.0	3.23	21.7	3.51	21.5	3.80	21.2	4.20	19.1	4.44	17.6	4.76
	-12.6	-13.0	23.0	3.26	22.7	3.30	22.3	3.36	21.9	3.60	21.6	3.83	21.1	4.17	19.2	4.36	17.7	4.62
	-7.0	-7.6	23.7	3.50	23.3	3.52	22.7	3.54	22.2	3.70	21.7	3.87	21.1	4.13	19.3	4.27	17.8	4.45
	-4.0	-4.4	24.1	3.63	23.6	3.63	22.9	3.63	22.3	3.76	21.7	3.89	21.0	4.11	19.3	4.22	17.8	4.36
	0.0	-0.4	24.5	3.81	24.0	3.79	23.2	3.75	22.5	3.83	21.8	3.91	21.0	4.08	19.4	4.15	17.9	4.24
	5.0	4.5	25.2	4.03	24.5	3.98	23.5	3.91	22.7	3.93	21.9	3.95	20.9	4.04	19.4	4.06	17.9	4.09
	10.0	9.0	25.8	4.25	25.0	4.17	23.9	4.06	22.9	4.02	21.9	3.98	20.9	4.00	19.5	3.98	18.0	3.94
	17.0	15.0	26.6	4.56	25.7	4.44	24.3	4.27	23.2	4.15	22.1	4.03	20.8	3.95	19.6	3.86	18.1	3.73
	20.0	19.0	34.7	4.69	33.5	4.56	31.8	4.37	30.3	4.21	28.8	4.05	27.1	3.93	25.6	3.81	23.6	3.64
	25.0	23.0	48.2	4.91	46.6	4.75	44.1	4.52	42.0	4.30	40.0	4.09	37.6	3.89	35.5	3.72	32.8	3.49
	30.0	28.0	48.2	4.50	46.6	4.35	44.1	4.13	42.0	3.93	40.0	3.74	37.6	3.55	35.5	3.38	32.8	3.16
	35.0	32.0	48.2	4.09	46.6	3.95	44.1	3.73	42.0	3.56	40.0	3.40	37.6	3.21	35.5	3.04	32.8	2.83
	40.0	36.0	48.2	3.69	46.6	3.55	44.1	3.34	42.0	3.20	40.0	3.05	37.6	2.86	35.5	2.71	32.8	2.50
	45.0	41.0	48.2	3.29	46.6	3.16	44.1	2.96	42.0	2.84	40.0	2.71	37.6	2.53	35.5	2.38	32.8	2.18
	47.0	43.0	48.2	3.17	46.6	3.04	44.1	2.85	42.0	2.73	**40.0**	**2.61**	37.6	2.43	35.5	2.29	32.8	2.09
	50.0	46.0	48.2	3.05	46.6	2.93	44.1	2.74	42.0	2.63	40.0	2.51	37.6	2.34	35.5	2.20	32.8	2.01
	55.0	51.0	48.2	2.86	46.6	2.75	44.1	2.57	42.0	2.46	40.0	2.36	37.6	2.20	35.5	2.07	32.8	1.89
	60.0	56.0	48.2	2.66	46.6	2.55	44.1	2.39	42.0	2.29	40.0	2.19	37.6	2.04	35.5	1.92	32.8	1.76
50	-21.6	-22.0	26.2	2.46	26.1	2.55	26.0	2.68	25.8	3.02	25.6	3.36	25.3	3.83	24.9	4.11	24.3	4.48
	-17.1	-17.5	28.2	2.91	27.9	2.95	27.8	3.22	27.4	3.46	26.9	3.71	26.6	4.14	25.8	4.31	25.2	4.63
	-12.6	-13.0	30.2	3.36	29.7	3.36	29.6	3.75	28.9	3.91	28.2	4.07	27.8	4.45	26.8	4.51	26.0	4.77
	-7.0	-7.6	32.7	3.92	32.0	3.86	31.8	4.42	30.8	4.46	29.9	4.51	29.4	4.84	28.0	4.75	27.1	4.95
	-4.0	-4.4	34.1	4.23	33.2	4.13	33.0	4.77	31.9	4.76	30.7	4.75	30.3	5.05	28.7	4.89	27.1	4.84
	0.0	-0.4	35.9	4.63	34.8	4.49	34.6	5.25	33.3	5.16	31.9	5.06	31.4	5.33	29.5	5.06	27.1	4.71
	5.0	4.5	38.1	5.13	36.8	4.94	36.7	5.84	35.0	5.65	33.3	5.46	31.4	5.12	29.5	4.87	27.1	4.53
	10.0	9.0	40.3	5.63	38.9	5.39	36.7	5.04	35.0	4.87	33.3	4.70	31.4	4.41	29.5	4.19	27.1	3.89
	17.0	15.0	40.3	4.85	38.9	4.65	36.7	4.34	35.0	4.19	33.3	4.04	31.4	3.80	29.5	3.60	27.1	3.34
	20.0	19.0	40.3	4.61	38.9	4.42	36.7	4.12	35.0	3.98	33.3	3.83	31.4	3.60	29.5	3.42	27.1	3.17
	25.0	23.0	40.3	4.21	38.9	4.04	36.7	3.77	35.0	3.64	33.3	3.50	31.4	3.29	29.5	3.12	27.1	2.89
	30.0	28.0	40.3	3.82	38.9	3.66	36.7	3.42	35.0	3.29	33.3	3.17	31.4	2.98	29.5	2.82	27.1	2.61
	35.0	32.0	40.3	3.43	38.9	3.28	36.7	3.07	35.0	2.95	33.3	2.83	31.4	2.67	29.5	2.52	27.1	2.33
	40.0	36.0	40.3	3.04	38.9	2.91	36.7	2.72	35.0	2.61	33.3	2.50	31.4	2.36	29.5	2.23	27.1	2.05
	45.0	41.0	40.3	2.66	38.9	2.55	36.7	2.39	35.0	2.29	33.3	2.18	31.4	2.06	29.5	1.94	27.1	1.79
	47.0	43.0	40.3	2.55	38.9	2.45	36.7	2.29	35.0	2.20	**33.3**	**2.10**	31.4	1.98	29.5	1.87	27.1	1.72
	50.0	46.0	40.3	2.46	38.9	2.36	36.7	2.21	35.0	2.12	33.3	2.02	31.4	1.91	29.5	1.80	27.1	1.65
	55.0	51.0	40.3	2.31	38.9	2.21	36.7	2.07	35.0	1.99	33.3	1.90	31.4	1.79	29.5	1.69	27.1	1.55
	60.0	56.0	40.3	2.15	38.9	2.06	36.7	1.93	35.0	1.85	33.3	1.76	31.4	1.67	29.5	1.57	27.1	1.44

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

MAXIMUM HEATING CAPACITY

ZRUN024GSS0 and ZRUM036GSS0

Table 53: ZRUN024GSS0 Maximum Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	16.1	1.27	16.0	1.45	15.9	1.72	15.8	1.91	15.7	2.09	15.6	2.35	15.5	2.51	15.4	2.72
	-17.1	-17.5	18.1	1.47	18.0	1.65	17.9	1.91	17.7	2.17	17.6	2.36	17.3	2.59	17.1	2.72	16.8	2.90
	-12.6	-13.0	20.1	1.67	20.0	1.86	19.9	2.09	19.7	2.44	19.5	2.63	19.1	2.83	18.7	2.93	18.1	3.07
	-7.0	-7.6	22.6	1.92	22.5	2.11	22.3	2.33	22.1	2.78	21.9	2.96	21.3	3.13	20.6	3.19	19.8	3.28
	-4.0	-4.4	23.9	2.06	23.8	2.24	23.6	2.45	23.4	2.95	23.2	3.14	22.4	3.29	21.7	3.33	20.7	3.39
	0.0	-0.4	25.7	2.24	25.6	2.43	25.4	2.62	25.1	3.19	24.9	3.37	24.0	3.50	23.1	3.52	22.0	3.55
	5.0	4.5	27.9	2.46	27.8	2.65	27.6	2.82	27.3	3.49	27.0	3.67	25.9	3.76	24.9	3.75	23.5	3.73
	10.0	9.0	32.0	2.69	31.4	2.88	30.4	3.03	29.6	3.39	28.8	3.48	27.4	3.43	25.5	3.34	23.4	3.23
	17.0	15.0	37.7	3.00	36.4	3.19	34.3	3.32	32.7	3.27	31.2	3.22	29.4	3.05	27.6	2.96	25.4	2.83
	20.0	19.0	37.7	3.14	36.4	3.33	34.3	3.28	32.7	3.19	31.2	3.11	29.4	2.94	27.6	2.85	25.4	2.73
	25.0	23.0	37.7	3.36	36.4	3.23	34.3	3.02	32.7	2.97	31.2	2.92	29.4	2.76	27.6	2.68	25.4	2.56
	30.0	28.0	37.7	3.13	36.4	3.01	34.3	2.84	32.7	2.79	31.2	2.73	29.4	2.58	27.6	2.50	25.4	2.39
	35.0	32.0	37.7	2.89	36.4	2.80	34.3	2.66	32.7	2.60	31.2	2.54	29.4	2.40	27.6	2.33	25.4	2.22
	40.0	36.0	37.7	2.66	36.4	2.59	34.3	2.48	32.7	2.42	31.2	2.35	29.4	2.22	27.6	2.15	25.4	2.06
	45.0	41.0	37.7	2.43	36.4	2.38	34.3	2.30	32.7	2.23	31.2	2.17	29.4	2.04	27.6	1.97	25.4	1.89
	47.0	43.0	37.7	2.34	36.4	2.30	34.3	2.22	32.7	2.16	**31.2**	**2.09**	29.4	1.97	27.6	1.91	25.4	1.82
	50.0	46.0	37.7	2.26	36.4	2.21	34.3	2.14	32.7	2.08	31.2	2.01	29.4	1.90	27.6	1.84	25.4	1.75
	55.0	51.0	37.7	2.12	36.4	2.07	34.3	2.01	32.7	1.95	31.2	1.89	29.4	1.78	27.6	1.72	25.4	1.65
	60.0	56.0	37.7	1.97	36.4	1.93	34.3	1.87	32.7	1.81	31.2	1.76	29.4	1.66	27.6	1.60	25.4	1.53

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Table 54: ZRUM036GSS0 Maximum Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	27.3	2.05	27.2	2.34	27.0	2.78	26.8	3.08	26.7	3.38	26.5	3.80	26.3	4.06	26.1	4.41
	-17.1	-17.5	30.0	2.34	29.9	2.63	29.7	3.04	29.5	3.42	29.3	3.72	28.8	4.09	28.4	4.30	27.9	4.58
	-12.6	-13.0	32.7	2.64	32.6	2.91	32.4	3.29	32.1	3.76	31.9	4.05	31.1	4.38	30.5	4.54	29.7	4.76
	-7.0	-7.6	36.1	3.00	36.0	3.27	35.8	3.60	35.4	4.19	35.1	4.47	34.1	4.73	33.1	4.84	31.8	4.98
	-4.0	-4.4	37.9	3.20	37.8	3.46	37.6	3.77	37.2	4.41	36.8	4.69	35.6	4.92	34.5	5.00	33.0	5.10
	0.0	-0.4	40.4	3.46	40.2	3.72	39.9	3.99	39.5	4.72	39.1	4.99	37.7	5.18	36.4	5.21	34.6	5.26
	5.0	4.5	43.4	3.79	43.2	4.03	42.9	4.27	42.5	5.10	42.0	5.36	40.3	5.50	38.7	5.48	36.5	5.45
	10.0	9.0	52.0	4.11	50.9	4.35	49.3	4.55	48.0	4.98	46.6	5.12	44.3	5.04	41.3	4.92	37.9	4.76
	17.0	15.0	64.1	4.57	61.8	4.80	58.3	4.94	55.6	4.87	53.0	4.79	49.9	4.54	47.0	4.40	43.1	4.22
	20.0	19.0	64.1	4.77	61.8	4.99	58.3	4.91	55.6	4.78	53.0	4.65	49.9	4.41	47.0	4.27	43.1	4.09
	25.0	23.0	64.1	5.09	61.8	4.88	58.3	4.57	55.6	4.49	53.0	4.42	49.9	4.18	47.0	4.05	43.1	3.88
	30.0	28.0	64.1	4.79	61.8	4.62	58.3	4.35	55.6	4.27	53.0	4.18	49.9	3.95	47.0	3.83	43.1	3.67
	35.0	32.0	64.1	4.49	61.8	4.35	58.3	4.13	55.6	4.04	53.0	3.95	49.9	3.73	47.0	3.61	43.1	3.45
	40.0	36.0	64.1	4.19	61.8	4.08	58.3	3.92	55.6	3.81	53.0	3.71	49.9	3.50	47.0	3.39	43.1	3.24
	45.0	41.0	64.1	3.90	61.8	3.82	58.3	3.70	55.6	3.59	53.0	3.47	49.9	3.27	47.0	3.17	43.1	3.03
	47.0	43.0	64.1	3.79	61.8	3.71	58.3	3.60	55.6	3.49	**53.0**	**3.38**	49.9	3.19	47.0	3.08	43.1	2.95
	50.0	46.0	64.1	3.65	61.8	3.58	58.3	3.46	55.6	3.36	53.0	3.26	49.9	3.07	47.0	2.97	43.1	2.84
	55.0	51.0	64.1	3.43	61.8	3.36	58.3	3.25	55.6	3.15	53.0	3.06	49.9	2.88	47.0	2.79	43.1	2.66
	60.0	56.0	64.1	3.19	61.8	3.12	58.3	3.02	55.6	2.93	53.0	2.84	49.9	2.68	47.0	2.59	43.1	2.48

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping. 0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

MAXIMUM HEATING CAPACITY

ZRUM048GSS0 and ZRUM060GSS0

MULTI V™ S WITH LGRED°

Table 55: ZRUM048GSS0 Maximum Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	31.4	2.33	31.3	2.67	31.1	3.17	30.9	3.51	30.7	3.85	30.5	4.33	30.3	4.63	30.1	5.02
	-17.1	-17.5	35.5	2.75	35.4	3.10	35.2	3.58	34.9	4.13	34.6	4.48	34.1	4.91	33.6	5.15	32.9	5.47
	-12.6	-13.0	39.7	3.17	39.5	3.53	39.2	3.99	38.9	4.75	38.6	5.10	37.7	5.48	36.9	5.67	35.8	5.92
	-7.0	-7.6	44.8	3.69	44.6	4.07	44.3	4.50	43.9	5.52	43.5	5.88	42.2	6.20	41.0	6.32	39.3	6.48
	-4.0	-4.4	47.5	3.97	47.3	4.36	47.0	4.77	46.6	5.93	46.1	6.29	44.6	6.58	43.2	6.66	41.2	6.78
	0.0	-0.4	51.2	4.34	51.0	4.75	50.7	5.14	50.1	6.48	49.6	6.85	47.8	7.09	46.1	7.13	43.8	7.17
	5.0	4.5	55.8	4.81	55.6	5.23	55.2	5.59	54.6	7.17	54.0	7.54	51.8	7.73	49.7	7.71	46.9	7.67
	10.0	9.0	63.3	5.27	62.0	5.71	60.1	6.05	58.5	6.91	56.9	7.10	54.2	6.99	50.4	6.82	46.3	6.59
	17.0	15.0	73.8	5.92	71.1	6.38	67.0	6.69	64.0	6.59	61.0	6.49	57.4	6.15	54.1	5.96	49.6	5.71
	20.0	19.0	73.8	6.20	71.1	6.67	67.0	6.56	64.0	6.39	61.0	6.22	57.4	5.89	54.1	5.71	49.6	5.47
	25.0	23.0	73.8	6.67	71.1	6.39	67.0	5.99	64.0	5.88	61.0	5.78	57.4	5.47	54.1	5.30	49.6	5.08
	30.0	28.0	73.8	6.13	71.1	5.90	67.0	5.56	64.0	5.45	61.0	5.34	57.4	5.05	54.1	4.90	49.6	4.69
	35.0	32.0	73.8	5.59	71.1	5.41	67.0	5.14	64.0	5.02	61.0	4.90	57.4	4.63	54.1	4.49	49.6	4.29
	40.0	36.0	73.8	5.05	71.1	4.91	67.0	4.71	64.0	4.59	61.0	4.47	57.4	4.21	54.1	4.08	49.6	3.90
	45.0	41.0	73.8	4.51	71.1	4.42	67.0	4.28	64.0	4.15	61.0	4.03	57.4	3.79	54.1	3.67	49.6	3.51
	47.0	43.0	73.8	4.32	71.1	4.23	67.0	4.10	64.0	3.97	**61.0**	**3.85**	57.4	3.63	54.1	3.51	49.6	3.35
	50.0	46.0	73.8	4.16	71.1	4.07	67.0	3.94	64.0	3.83	61.0	3.71	57.4	3.49	54.1	3.38	49.6	3.23
	55.0	51.0	73.8	3.90	71.1	3.82	67.0	3.70	64.0	3.59	61.0	3.48	57.4	3.28	54.1	3.17	49.6	3.03
	60.0	56.0	73.8	3.63	71.1	3.55	67.0	3.44	64.0	3.34	61.0	3.24	57.4	3.05	54.1	2.95	49.6	2.82

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.
0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

Table 56: ZRUM060GSS0 Maximum Heating Capacities.

Combination (%)	Outdoor Air Temp.		Indoor Air Temp. °F DB															
			59		61		64		67		70		73		76		80	
	°F DB	°F WB	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW	TC MBh	PI kW
100	-21.6	-22.0	36.5	3.05	36.4	3.49	36.2	4.14	35.9	4.59	35.7	5.04	35.4	5.66	35.3	6.04	35.0	6.56
	-17.1	-17.5	39.8	3.46	39.6	3.88	39.4	4.48	39.1	5.03	38.8	5.46	38.2	6.01	37.7	6.33	37.0	6.75
	-12.6	-13.0	43.1	3.87	42.9	4.27	42.6	4.82	42.3	5.46	41.9	5.88	41.0	6.36	40.2	6.61	39.1	6.94
	-7.0	-7.6	47.1	4.38	46.9	4.76	46.6	5.24	46.2	6.00	45.8	6.41	44.4	6.80	43.2	6.96	41.6	7.17
	-4.0	-4.4	49.3	4.66	49.1	5.02	48.8	5.46	48.3	6.30	47.8	6.69	46.3	7.03	44.8	7.14	42.9	7.30
	0.0	-0.4	52.2	5.03	52.0	5.37	51.6	5.76	51.1	6.68	50.6	7.07	48.8	7.34	47.0	7.39	44.7	7.46
	5.0	4.5	55.8	5.48	55.6	5.81	55.2	6.14	54.6	7.17	54.0	7.54	51.8	7.73	49.7	7.71	46.9	7.67
	10.0	9.0	68.3	5.94	66.9	6.25	64.7	6.51	62.9	7.04	61.1	7.24	58.1	7.12	54.1	6.95	49.6	6.72
	17.0	15.0	85.9	6.58	82.7	6.86	78.0	7.04	74.5	6.93	71.0	6.82	66.8	6.46	62.9	6.27	57.7	6.01
	20.0	19.0	85.9	6.86	82.7	7.12	78.0	7.01	74.5	6.83	71.0	6.64	66.8	6.29	62.9	6.10	57.7	5.84
	25.0	23.0	85.9	7.31	82.7	7.02	78.0	6.57	74.5	6.46	71.0	6.34	66.8	6.00	62.9	5.82	57.7	5.57
	30.0	28.0	85.9	6.93	82.7	6.68	78.0	6.29	74.5	6.17	71.0	6.05	66.8	5.72	62.9	5.54	57.7	5.30
	35.0	32.0	85.9	6.55	82.7	6.34	78.0	6.02	74.5	5.88	71.0	5.75	66.8	5.43	62.9	5.26	57.7	5.03
	40.0	36.0	85.9	6.16	82.7	6.00	78.0	5.75	74.5	5.60	71.0	5.45	66.8	5.14	62.9	4.98	57.7	4.76
	45.0	41.0	85.9	5.77	82.7	5.66	78.0	5.48	74.5	5.31	71.0	5.15	66.8	4.85	62.9	4.70	57.7	4.49
	47.0	43.0	85.9	5.64	82.7	5.52	78.0	5.35	74.5	5.19	**71.0**	**5.03**	66.8	4.74	62.9	4.59	57.7	4.38
	50.0	46.0	85.9	5.43	82.7	5.32	78.0	5.15	74.5	5.00	71.0	4.84	66.8	4.57	62.9	4.42	57.7	4.22
	55.0	51.0	85.9	5.10	82.7	4.99	78.0	4.84	74.5	4.69	71.0	4.55	66.8	4.29	62.9	4.15	57.7	3.96
	60.0	56.0	85.9	4.74	82.7	4.64	78.0	4.50	74.5	4.36	71.0	4.23	66.8	3.99	62.9	3.86	57.7	3.68

TC = Total Capacity (MBh). PI = Power Input (kW) (includes compressor and outdoor fan).

The System Combination Ratio must be between 50–130%.

Nominal capacity as rated: 0 ft. above sea level with 25 ft. of refrigerant piping.
0 ft. level difference between outdoor and indoor units.

Nominal heating capacity rating obtained with air entering the indoor unit at 70ºF dry bulb (DB) and outdoor ambient conditions of 47ºF dry bulb (DB) and 43ºF wet bulb (WB).

Grey shading indicates reference data. When operating at this temperature, these values can be different if the system is not running consistently.

NOTICE

The correction factors shown below are calculated in the LATS software program.

Defrost Correction Factor for Heating Operation

Capacity tables do not take into consideration capacity reduction when frost has accumulated on the condenser coil, nor during defrost operation. Integrated heating capacity values can be obtained as follows:

Formula: A = B x C

Where: A = Integrated heating capacity
B = Heating capacity value given in table of capacity characteristics
C = Integrated correction factor for frost accumulation

Table 57: Outdoor Unit Frost Accumulation Factor (Heating)[1].

Entering DB (ºF)	19.4	23.0	26.6	32.0	37.4	41.0	44.6
Derate factor	0.98	0.95	0.93	0.86	0.93	0.96	1.0

[1]At 85% outdoor air relative humidity.

NOTICE

There will be temporary reduction in capacity when snow piles up on the outside surface of the outdoor unit heat exchanger. The level of capacity reduction depends on a number of factors, for example, outdoor temperature (°F DB), relative humidity (RH), and the amount of frost present.

Elevation Correction Factors

For each outdoor unit, calculate the equivalent length of the liquid line from the outdoor unit to the farthest indoor unit. Also, determine the elevation difference of farthest indoor unit above or below the outdoor unit. Find corresponding cooling capacity correction factor in the table below. Multiply the cooling correction factor by standard cooling capacity. The resultant is the NET cooling capacity.

NOTICE

The correction factors shown below are calculated in the LATS software program.

Table 58: Cooling Correction Factors.

Elevation Differences (ft.)	Equivalent Length (ELF)1											
	25	33	66	98	131	164	197	230	263	295	328	≥361
HU—Indoor units above Outdoor Unit (ft.)												
0	1.00	0.99	0.97	0.95	0.93	0.91	0.88	0.87	0.85	0.83	0.83	0.82
25	1.00	0.99	0.97	0.95	0.93	0.91	0.88	0.87	0.85	0.83	0.83	0.82
33	-	0.99	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.83	0.82	0.82
66	-	-	0.96	0.95	0.93	0.90	0.88	0.86	0.85	0.83	0.82	0.82
98	-	-	-	0.94	0.92	0.90	0.88	0.86	0.84	0.83	0.82	0.82
131	-	-	-	-	0.92	0.90	0.88	0.86	0.84	0.83	0.82	0.82
164	-	-	-	-	-	0.90	0.88	0.86	0.84	0.83	0.82	0.82
HL—Outdoor Unit Above Indoor Units (ft.)												
0	1.00	0.99	0.97	0.95	0.93	0.91	0.90	0.87	0.88	0.84	0.86	0.84
25	1.00	0.99	0.97	0.95	0.93	0.91	0.90	0.87	0.88	0.84	0.86	0.84
33	-	0.99	0.98	0.95	0.93	0.91	0.90	0.88	0.88	0.84	0.86	0.84
66	-	-	0.98	0.95	0.93	0.91	0.90	0.88	0.88	0.84	0.86	0.84
98	-	-	-	0.96	0.93	0.91	0.90	0.88	0.89	0.84	0.86	0.84
131	-	-	-	-	0.93	0.91	0.90	0.88	0.89	0.84	0.86	0.84

* ELF = Equivalent Pipe Length—Sum of the actual pipe length plus allocations for pressure drop through elbows, valves, and other fittings in equivalent length.

ELECTRICAL

General Guidelines on page 103
Connections for Heat Pump Systems on page 104
Connections for Heat Recovery Systems on page 106
Heat Recovery Unit Wiring Connections on page 107

GENERAL POWER WIRING / COMMUNICATION CABLE GUIDELINES

General Power Wiring / Communications Cable Guidelines

- Follow manufacturer's circuit diagrams displayed on the inside of the control box covers.
- Have a separate power supply for the heat recovery units / indoor units.
- Provide a circuit breaker switch between the power source and the outdoor unit.
- Confirm power source specifications.
- Confirm that the electrical capacity is sufficient.
- Starting current must be maintained ±10 percent of the rated current marked on the name plate.
- Confirm wiring / cable thickness specifications:

1. Power wiring is field supplied. Wire size is selected based on the larger MCA value, and must comply with the applicable local and national codes.
2. Communication cable between ODU to IDUs / HRUs to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Main ODU chassis only. ⃠ Do not ground the ODU to IDUs / HRUs communication cable at any other point. Wiring must comply with all applicable local and national codes.

- It is recommended that a circuit breaker is installed, especially if conditions could become wet or moist.
- Include a disconnect in the power wiring system, add an air gap contact separation of at least 1/8 inch in each active (phase) conductor.
- Any openings where the field wiring enters the cabinet must be completely sealed.

⚠ WARNING

- *Terminal screws may loosen during transport. Properly tighten the terminal connections during installation or risk electric shock, physical injury or death.*
- *Loose wiring may cause the wires to burnout or the terminal to overheat and catch fire. There is a risk of electric shock, physical injury or death.*

NOTICE

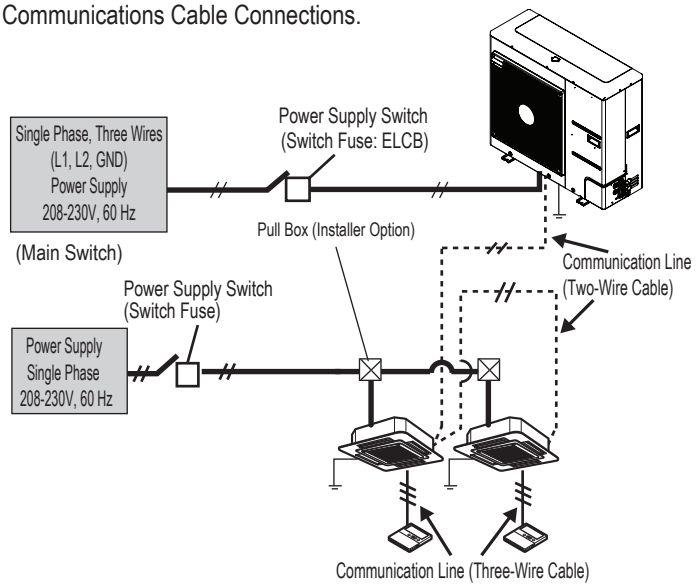
- *Terminal screws may loosen during transport. Properly tighten the terminal connections during installation or risk equipment malfunction or property damage.*
- *Loose wiring may cause unit malfunction, the wires to burnout or the terminal to overheat and catch fire. There is a risk of equipment malfunction or property damage.*
- *Confirm that the electrical capacity is sufficient. A voltage drop may cause magnetic switch vibration, fuse breaks, or disturbance to the normal function of an overload protection device.*

CONNECTIONS FOR HEAT PUMP OPERATION

⚠ DANGER

Refer to electrical data table for full load ampere ratings. Properly size all circuit breakers / fuses, wiring, and field-provided components per applicable local, state, and federal codes. There is a risk of fire, electric shock, explosion, physical injury or death.

Figure 42: ZRUN024GSS0 Heat Pump Only System Power Wiring / Communications Cable Connections.



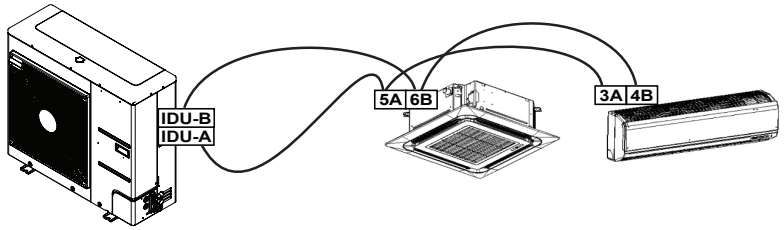
NOTICE

Refer to the Product Data section for dimensional drawings, wiring, and refrigerant piping diagrams for the exact locations of the piping and electrical connection locations.

⚠ WARNING

- *Ground wiring is required to prevent accidental electrical shock during current leakage, communication problems from electrical noise, and motor current leakage. Always ground indoor units to help prevent electrical shock accidents or communication signal disruption. ⃠ Do not connect the ground line to the pipes. There is risk of fire, electric shock, explosion, physical injury or death.*
- *Install a main shutoff switch that interrupts all power sources simultaneously. There is risk of fire, electric shock, explosion, physical injury or death.*
- *Operating the system in reversed phase can damage the compressor or other components. If there is a possibility of reversed phase, phase loss, momentary blackout, or the power goes on and off while the system is operating, install a field-supplied phase loss protection circuit.*
- *The GND terminal at the main PCB is a negative terminal for dry contact, not a ground. Inadequate connections may generate heat, cause a fire, and physical injury or death.*

Figure 43: ZRUN024GSS0 Heat Pump Only System Daisy-Chain Power Wiring / Communications Cable Example.



NOTICE

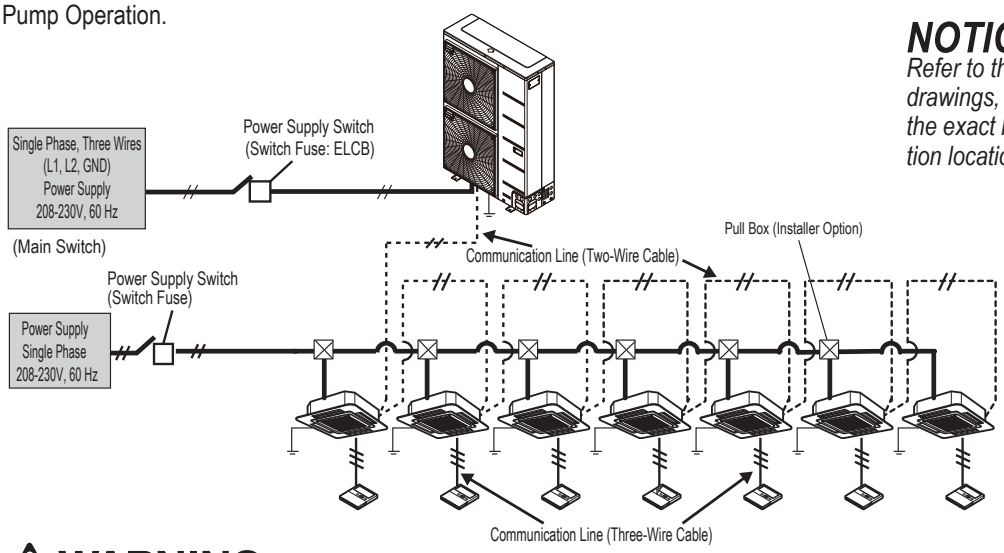
- *Maintain polarity throughout the communication network. The system will malfunction if not properly wired.*
- *If the system operates in reversed phase, it may break the compressors and other components.*
- *If there is a possibility of reversed phase, phase loss, momentary blackout, or the power goes on and off while the system is operating, install a field-supplied phase loss protection circuit. Operating the system in reverse phase may break the compressor and other unit components.*

CONNECTIONS FOR HEAT PUMP OPERATION

⚠ DANGER

Refer to electrical data table for full load ampere ratings. Properly size all circuit breakers / fuses, wiring, and field-provided components per applicable local, state, and federal codes. There is a risk of fire, electric shock, explosion, physical injury or death.

Figure 44: Power Wiring / Communications Cable Connections--ZRUM038GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Units For Heat Pump Operation.



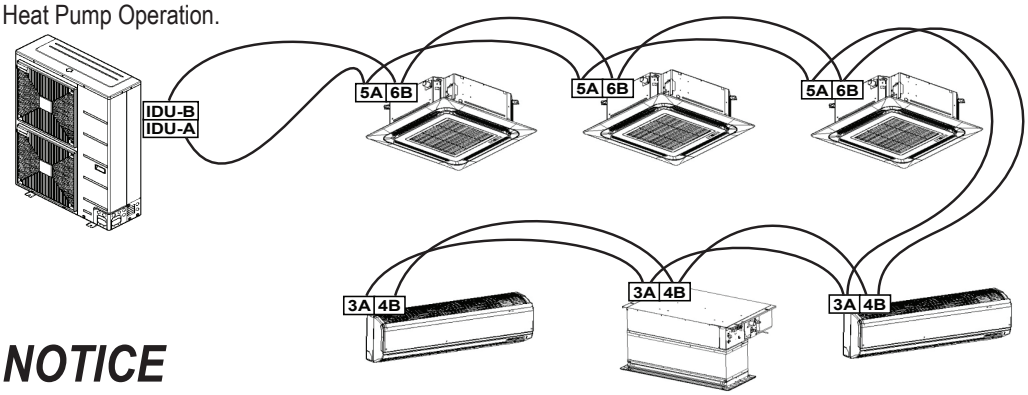
NOTICE

Refer to the Product Data section for dimensional drawings, wiring, and refrigerant piping diagrams for the exact locations of the piping and electrical connection locations.

⚠ WARNING

- *Ground wiring is required to prevent accidental electrical shock during current leakage, communication problems from electrical noise, and motor current leakage. Always ground indoor units to help prevent electrical shock accidents or communication signal disruption. ⃠ Do not connect the ground line to the pipes. There is risk of fire, electric shock, explosion, physical injury or death.*
- *Install a main shutoff switch that interrupts all power sources simultaneously. There is risk of fire, electric shock, explosion, physical injury or death.*
- *Operating the system in reversed phase can damage the compressor or other components. If there is a possibility of reversed phase, phase loss, momentary blackout, or the power goes on and off while the system is operating, install a field-supplied phase loss protection circuit.*
- *The GND terminal at the main PCB is a negative terminal for dry contact, not a ground. Inadequate connections may generate heat, cause a fire, and physical injury or death.*

Figure 45: Daisy Chain Power Wiring / Communications Cable Example--ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Units for Heat Pump Operation.



NOTICE

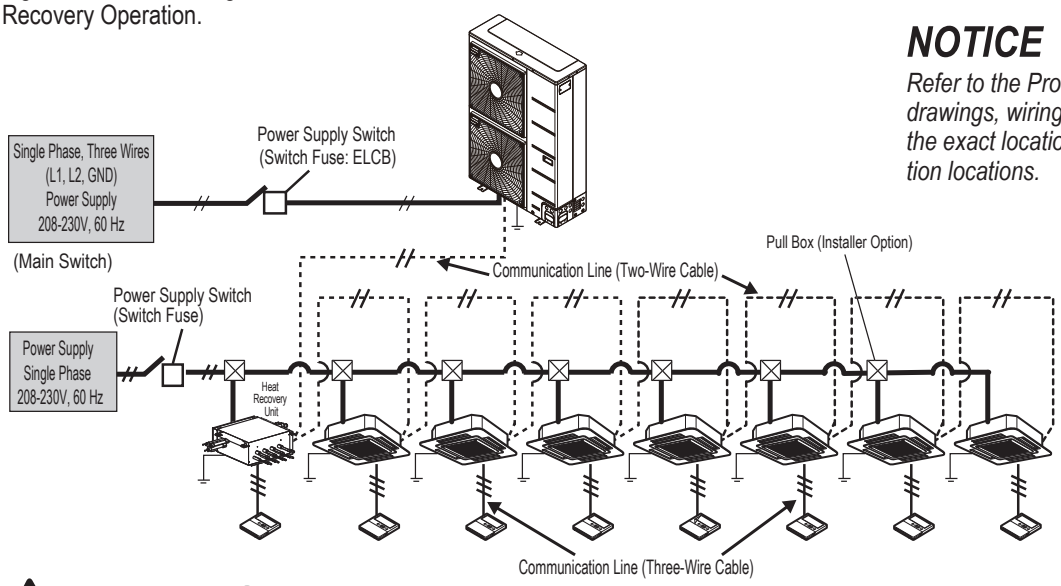
- *Maintain polarity throughout the communication network. The system will malfunction if not properly wired.*
- *If the system operates in reversed phase, it may break the compressors and other components.*
- *If there is a possibility of reversed phase, phase loss, momentary blackout, or the power goes on and off while the system is operating, install a field-supplied phase loss protection circuit. Operating the system in reverse phase may break the compressor and other unit components.*

CONNECTIONS FOR HEAT RECOVERY OPERATION

⚠ DANGER

Refer to electrical data table for full load ampere ratings. Properly size all circuit breakers / fuses, wiring, and field-provided components per applicable local, state, and federal codes. There is a risk of fire, electric shock, explosion, physical injury or death.

Figure 46: Power Wiring / Communications Cable Connections--ZRUM038GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Units For Heat Recovery Operation.



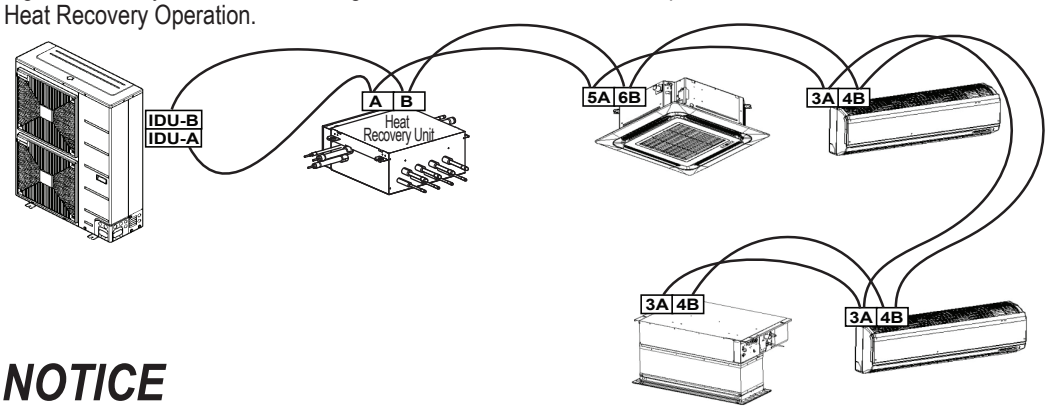
NOTICE

Refer to the Product Data section for dimensional drawings, wiring, and refrigerant piping diagrams for the exact locations of the piping and electrical connection locations.

⚠ WARNING

- *Ground wiring is required to prevent accidental electrical shock during current leakage, communication problems from electrical noise, and motor current leakage. Always ground indoor units to help prevent electrical shock accidents or communication signal disruption. ⃠ Do not connect the ground line to the pipes. There is risk of fire, electric shock, explosion, physical injury or death.*
- *Install a main shutoff switch that interrupts all power sources simultaneously. There is risk of fire, electric shock, explosion, physical injury or death.*
- *Operating the system in reversed phase can damage the compressor or other components. If there is a possibility of reversed phase, phase loss, momentary blackout, or the power goes on and off while the system is operating, install a field-supplied phase loss protection circuit.*
- *The GND terminal at the main PCB is a negative terminal for dry contact, not a ground. Inadequate connections may generate heat, cause a fire, and physical injury or death.*

Figure 47: Daisy Chain Power Wiring / Communications Cable Example--ZRUM036GSS0, ZRUM048GSS0, ZRUM060GSS0 Combination Units for Heat Recovery Operation.



NOTICE

- *Maintain polarity throughout the communication network. The system will malfunction if not properly wired.*
- *If the system operates in reversed phase, it may break the compressors and other components.*
- *If there is a possibility of reversed phase, phase loss, momentary blackout, or the power goes on and off while the system is operating, install a field-supplied phase loss protection circuit. Operating the system in reverse phase may break the compressor and other unit components.*

LG

HEAT RECOVERY UNIT WIRING CONNECTIONS

Heat Recovery Unit Power Wiring and Communications Cable Connections

1. Open the heat recovery unit control box cover (see image below).
2. Insert the power wiring / communications cable from the outdoor unit using the access holes.
3. Connect each wire to its appropriate terminal on the heat recovery unit control board. Verify that the color and terminal numbers from the outdoor unit wiring match the color and terminal numbers on the heat recovery unit.
4. Secure the power wiring / communications cable.

Figure 48: Accessing the Heat Recovery Control Unit Control Box.

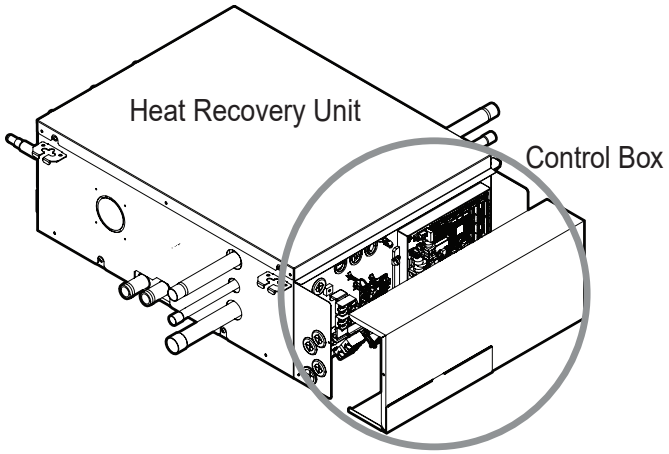


Figure 50: Control Box Connections.

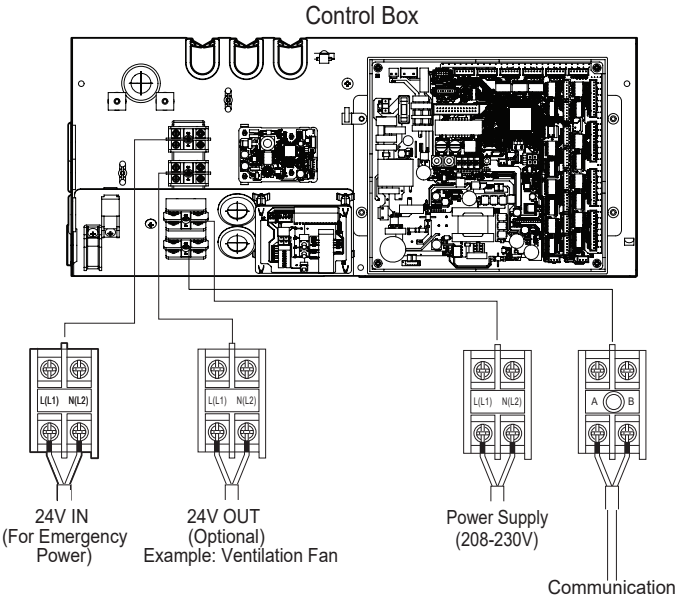
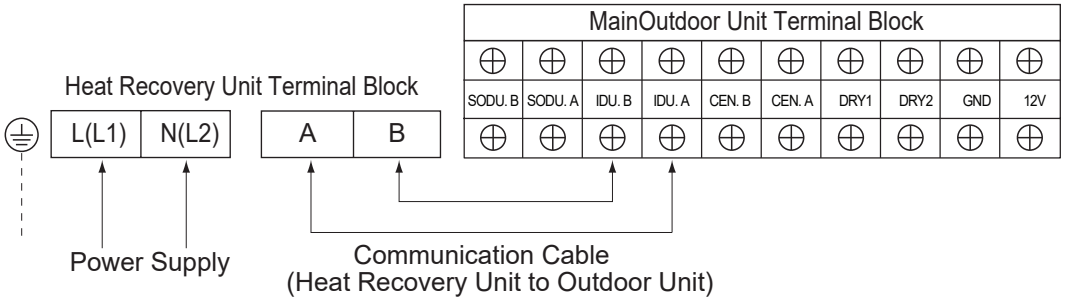


Figure 49: Close Up of Heat Recovery Unit to Outdoor Unit Terminal Block Connections.



PIPING LIMITATIONS AND PLACEMENT CONSIDERATIONS

Piping Limitations on page 109

Selecting the Best Location for Outdoor Unit(s) on page 113

Outdoor Unit Clearance Requirements on page 116

Installing Outdoor Units Indoors on page 119

Selecting the Best Location / Clearance Requirements for the Heat Recovery Unit(s) on page 121

PIPING LIMITATIONS

For Systems Operating in Heat Pump Mode

Following pages present Multi V S piping limitations and are for illustrative purposes only. Designers MUST use LATS when designing LG systems.

Figure 51: Heat Pump System Building Layout Listing the Piping Limitations — When the Outdoor Unit is Above the Indoor Units (ODU Appearances Will Vary Depending On Model).

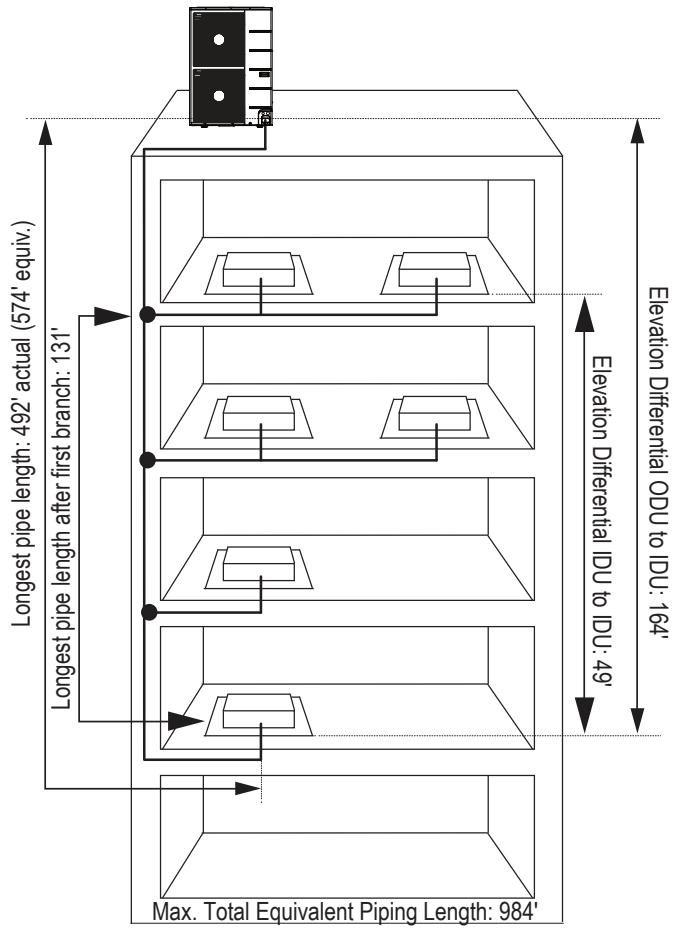


Figure 52: Heat Pump System Building Layout Listing the Piping Limitations — When the Outdoor Unit is Below the Indoor Units (ODU Appearances Will Vary Depending on Model).

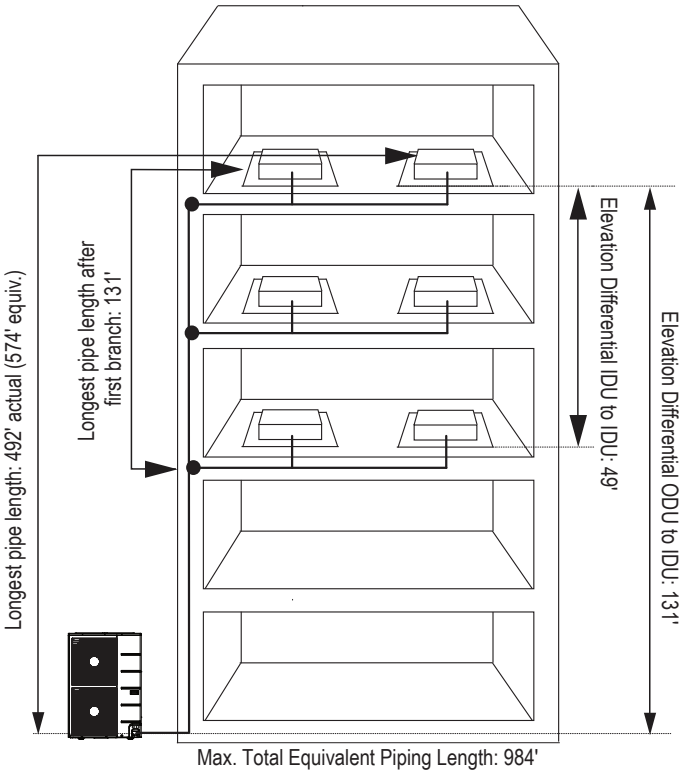


Table 59: Piping Limitations for Heat Pump Operation (See next page).

Length	Total pipe length	Longest actual pipe length	Equivalent pipe length1
	A + ΣB + ΣC ≤984 feet	≤492 feet	≤574 feet
ℓ	Longest pipe length after first branch		
	≤131 feet		
Elevation1	Elevation differential (Outdoor unit ↔ Indoor unit)		
	When the Outdoor unit is Positioned Higher than the Indoor Units	When the Outdoor unit is Positioned Lower than the Indoor Units	
	≤164 feet	≤131 feet	
Elevation2	Elevation differential (Indoor unit ↔ Indoor unit)		
	≤49 feet		
Distance between fittings and indoor units	≥20 inches		
Distance between fittings and Y-Branches / Headers	≥20 inches		
Distance between two Y-Branches / Headers	≥20 inches		

[1]Assume equivalent pipe length of Y-branch is 1.6 feet, and equivalent pipe length of header is 3.3 feet.

PIPING LIMITATIONS

MULTI V™ S WITH LGRED°

For Systems Operating in Heat Pump Mode

Following pages present Multi V S piping limitations and are for illustrative purposes only. Designers MUST use LATS when designing LG systems.

Example of Pipe Sizing When Installing For Heat Pump Mode

Example: Five (5) indoor units connected

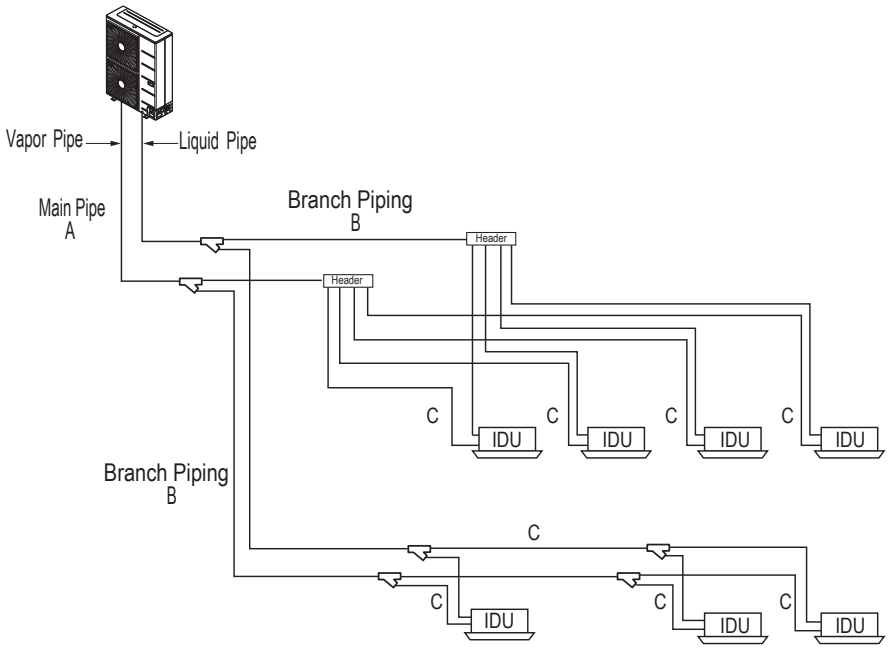
Multi V S Outdoor Unit.

IDU: Indoor Units.

A: Main Pipe from Outdoor Unit to Y-branches.

B: Branch Piping.

C: Branch Piping to Indoor Unit (IDU).



NOTICE

- *Always reference the LATS software report.*
- *Connection piping from branch to branch cannot exceed the main pipe diameter (A) used by the outdoor unit.*
- *Install the Headers so that the pipe distances between the between the connected indoor units are minimized. Large differences in pipe distances can cause indoor unit performances to fluctuate.*
- *Indoor units must be installed at a lower position than the Header.*
- *Y-branches cannot be used after Headers.*

Table 60: Main Pipe (A) Diameters from Outdoor Unit to First Y-branch (When System is Operating in Heat Pump Mode)..

ODU Capacity (ton)	Pipe Diameter When Pipe Length is ≤295 Feet Equivalent		Pipe Diameter When Pipe Length is ≥295 Feet Equivalent	
	Liquid Pipe (inches O.D.)	Vapor Pipe (inches O.D.)	Liquid Pipe (inches O.D.)	Vapor Pipe (inches O.D.)
2.0	3/8Ø	5/8Ø	1/2Ø	3/4Ø
3.0	3/8Ø	5/8Ø	1/2Ø	3/4Ø
4.0	3/8Ø	5/8Ø	1/2Ø	3/4Ø
5.0	3/8Ø	3/4Ø	1/2Ø	7/8Ø

Table 61: Branch Pipe (B) Diameters from Y-branch to Y-branch / Header.

Downstream Total Capacity of IDUs (Btu/h)[1]	Liquid Pipe (inches O.D.)	Vapor Pipe (inches O.D.)
≤12,300	1/4Ø	3/8Ø
≤32,400	1/4Ø	1/2Ø
≤54,600	3/8Ø	5/8Ø
≤76,400	3/8Ø	3/4Ø

[1]7,500~48,100 Btu/h 4-way 3 feet x 3 feet Cassette indoor units have Ø3/8 (liquid) and Ø5/8 (vapor); 7,500~19,100 Btu/h High Static Ducted indoor units have Ø1/4 (liquid) and Ø1/2 (vapor); 24,200 Btu/h High Static Ducted indoor units have Ø3/8 (liquid) and Ø5/8 (vapor).

Table 62: Indoor Unit Connecting Pipe from Branch (C).

Indoor Unit Capacity[1]	Liquid Pipe (inches O.D.)	Vapor Pipe (inches O.D.)
≤12,300	1/4Ø	3/8Ø
≤32,400	1/4Ø	1/2Ø
≤54,600	3/8Ø	5/8Ø
≤76,400	3/8Ø	3/4Ø

[1]7,500~48,100 Btu/h 4-way 3 feet x 3 feet Cassette indoor units have Ø3/8 (liquid) and Ø5/8 (vapor); 7,500~19,100 Btu/h High Static Ducted indoor units have Ø1/4 (liquid) and Ø1/2 (vapor); 24,200 Btu/h High Static Ducted indoor units have Ø3/8 (liquid) and Ø5/8 (vapor).

Conditional Applications

Conditional application are computed in LATS. See below for an explanation of when pipes are upsized.

When one or both conditions listed below are present, the diameter of main pipe (A) must be increased.

- If equivalent length between the outdoor unit and the farthest indoor unit is ≥295 feet, the diameters of the liquid and vapor pipes must be sized up.
- If elevation differential between the outdoor unit and the farthest indoor unit is ≥164 feet, the diameter of only the liquid pipe must be sized up.

PIPING LIMITATIONS

For Systems Operating in Heat Recovery Mode

Following pages present Multi V S piping limitations and are for illustrative purposes only. Designers MUST use LATS when designing LG systems.

Figure 53: Heat Recovery System Building Layout Listing the Piping Limitations — When the Outdoor Unit is Above the Indoor Units.

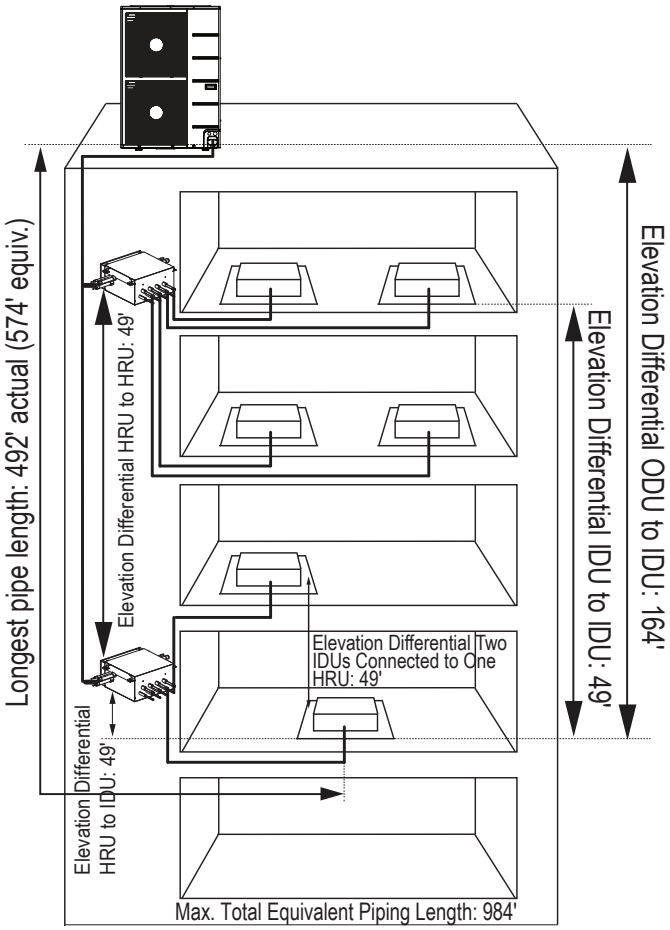


Figure 54: Heat Recovery System Building Layout Listing the Piping Limitations — When the Outdoor Unit is Below the Indoor Units.

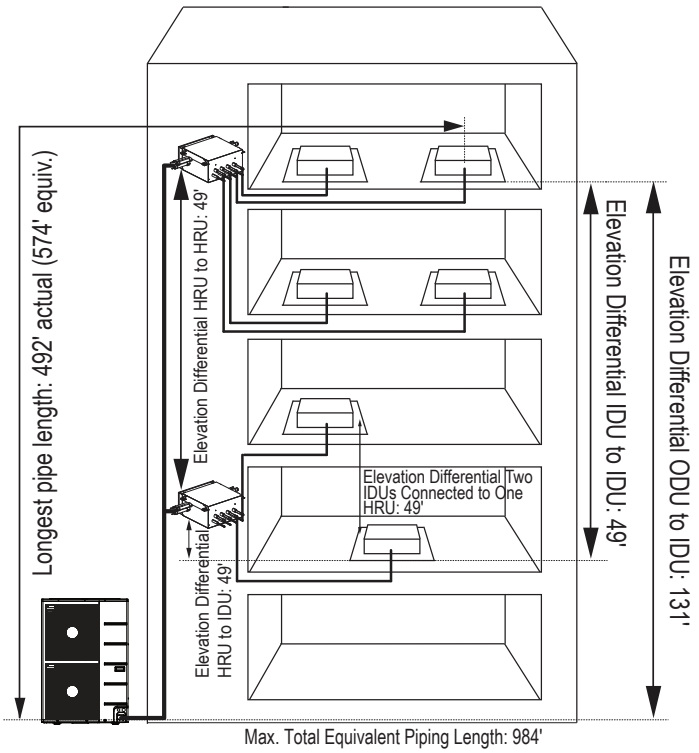


Table 63: Piping Limitations for Heat Recovery Operation (See next page).

Length	Total pipe length	Longest actual pipe length	Equivalent pipe length
	A + ΣB + ΣC ≤984 feet	≤492 feet	≤574 feet
ℓ	Longest pipe length after first branch		
	≤131 feet		
Elevation1	Elevation differential (Outdoor Unit ↔ Indoor Unit)		
	Height ≤164 feet (Outdoor Unit Above Indoor Unit); Height ≤131 feet (Outdoor Unit Below Indoor Unit);		
Elevation2	Elevation differential (Indoor Unit ↔ Indoor Unit)		
	height ≤49 feet		
Elevation3	Elevation differential (Indoor Unit ↔ Heat Recovery Unit)		
	49 feet		
Elevation4	Elevation differential (Indoor Unit ↔ Indoor Unit [connected to same Heat Recovery Unit])		
	49 feet		
Distance between fittings and Indoor Unit		≥20 inches	
Distance between fittings and Y-branches / Headers		≥20 inches	
Distance between two Y-branches / Headers		≥20 inches	
Height differential between two Heat Recovery Units if installed with a Y-branch		≤49 feet	
Height differential between two series-piped Heat Recovery Units		≤16 feet	

PIPING LIMITATIONS

For Systems Operating in Heat Recovery Mode

MULTI V S WITH LGRED°

Following pages present Multi V S piping limitations and are for illustrative purposes only. Designers MUST use LATS when designing LG systems.

Example of Pipe Sizing When Installing For Heat Recovery Operation

Example: Heat recovery system with four (4) heat recovery units, one (1) header, and twelve (12) indoor units connected

ODU: Outdoor Units.

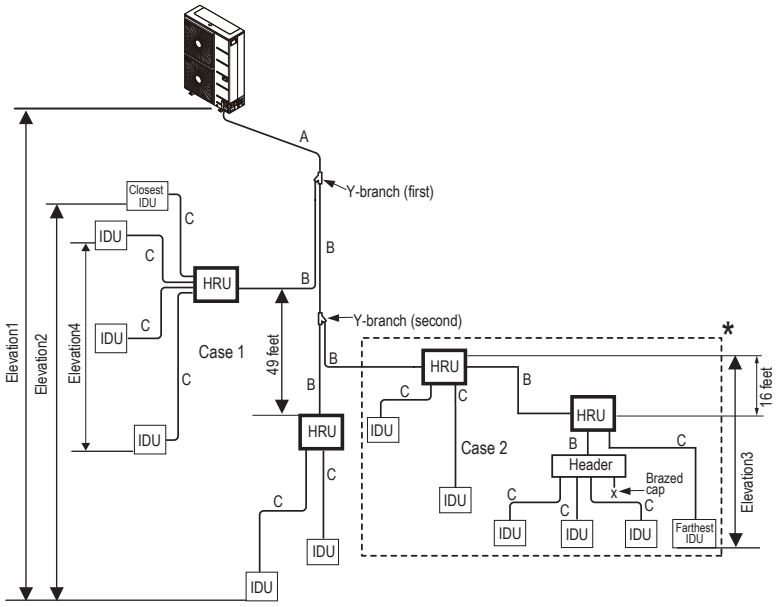
HRU: Heat Recovery Units.

IDU: Indoor units.

A: Main Pipe from Outdoor Unit to First Y-branch.

B: Heat Recovery Unit to Heat Recovery Unit, Y-branch to Heat Recovery Unit, Heat Recovery Unit to Header, or Y-branch to Y-branch.

C: Heat Recovery Unit / Header to Indoor Unit.



Case 1: Maximum height is 49 feet if installed with a Y-branch.
Case 2: Maximum height is 16 feet in heat recovery control unit series connection.

NOTICE

- *Always reference the LATS Multi V software report.*
- *Connection piping from branch to branch cannot exceed the main pipe diameter (A) used by the outdoor unit.*
- *Install the header branches or heat recovery units so that the pipe distances between the connected indoor units are minimized. Large differences in pipe distances can cause indoor unit performances to fluctuate.*
- ⃠ *Y-branches and other header branches cannot be installed downstream of the initial header branch.*
- *If large capacity indoor units (>12,000 Btu/h with piping sizes >5/8Ø / 3/8Ø) are installed, the valve group setting must be used. (Refer to the PCB of the heat recovery unit for the valve group control setting.)*

Table 64: Main Pipe (A) Diameters from Heat Recovery Outdoor Unit to First Y-branch.

ODU Capacity (Ton)	Pipe Diameter When Pipe Length is ≤295 feet			Pipe Diameter When Pipe Length is ≥295 feet		
	Liquid Pipe (inches O.D.)	High Pressure Vapor Pipe (inches O.D.)	Low Pressure Vapor Pipe (inches O.D.)	Liquid Pipe (inches O.D.)	High Pressure Vapor Pipe (inches O.D.)	Low Pressure Vapor Pipe (inches O.D.)
3.0, 4.0, 5.0 Combo	3/8Ø	5/8Ø	3/4Ø	1/2Ø	3/4Ø	7/8Ø

Table 65: Refrigerant Pipe (B) Diameters between Y-branches and Y-branches / Heat Recovery Unit / Headers.

Downstream Total Capacity of IDUs (Btu/h)[1]	Liquid Pipe (inches O.D.)	Vapor Pipe (inches O.D.)	
		Low Pressure	High Pressure
≤12,300	1/4Ø	1/2Ø	3/8Ø
≤32,400	3/8Ø	5/8Ø	1/2Ø
≤54,600	3/8Ø	3/4Ø	5/8Ø
≤76,400	3/8Ø	3/4Ø	5/8Ø

[1]7,500~48,100 Btu/h 4-way 3 feet x 3 feet Cassette indoor units have Ø3/8 (liquid) and Ø5/8 (vapor); 7,500~19,100 Btu/h High Static Ducted indoor units have Ø1/4 (liquid) and Ø1/2 (vapor); 24,200 Btu/h High Static Ducted indoor units have Ø3/8 (liquid) and Ø5/8 (vapor).

Table 66: Indoor Unit Connecting Pipe from Branch (C).

Indoor Unit Capacity[1]	Liquid Pipe (inches O.D.)	Vapor Pipe (inches O.D.)
≤12,300	1/4Ø	3/8Ø
≤32,400	1/4Ø	1/2Ø
≤54,600	3/8Ø	5/8Ø
≤76,400	3/8Ø	3/4Ø

[1]7,500~48,100 Btu/h 4-way 3 feet x 3 feet Cassette indoor units have Ø3/8 (liquid) and Ø5/8 (vapor); 7,500~19,100 Btu/h High Static Ducted indoor units have Ø1/4 (liquid) and Ø1/2 (vapor); 24,200 Btu/h High Static Ducted indoor units have Ø3/8 (liquid) and Ø5/8 (vapor).

Conditional Applications

Conditional application are computed in LATS. See below for an explanation of when pipes are upsized.

When one or both conditions listed below are present, the diameter of main pipe (A) must be increased.

- If equivalent length between the outdoor unit and the farthest indoor unit is ≥295 feet, the diameters of the liquid, high pressure vapor, and low pressure vapor pipes must be sized up.
- If elevation differential between the outdoor unit and the farthest indoor unit is ≥164 feet, the diameter of only the liquid pipe must be sized up.

PLACEMENT CONSIDERATIONS

Selecting the Best Location for the Outdoor Unit(s)

Selecting the Best Location for the Outdoor Unit(s)

⚠ DANGER

- ⃠ *Do not install the unit in an area where combustible gas will generate, flow, stagnate, or leak. These conditions can cause a fire, resulting in bodily injury or death.*
- ⃠ *Do not install the unit in a location where acidic solution and spray (sulfur) are often used as it can cause bodily injury or death.*
- ⃠ *Do not use the unit in environments where oil, steam, or sulfuric gas are present as it can cause bodily injury or death.*

⚠ WARNING

When deciding on a location to place the outdoor unit, be sure to choose an area where run-off from defrost will not accumulate and freeze on sidewalks or driveways, which will create unsafe conditions. Properly install and insulate any drain hoses to prevent the hose from freezing, cracking, leaking, and causing unsafe conditions from frozen condensate.

Install a fence to prevent pests from crawling into the unit or unauthorized individuals from accessing it. Pests and unauthorized individuals can damage internal components which can cause a fire, electric shock, physical injury or death. Follow the placement guidelines set forth in "Clearance Requirements".

Select a location for installing the outdoor unit that will meet the following conditions:

Dos

- *Where there is enough strength to bear the weight of the outdoor unit.*
- *A location that allows for optimum air flow and is easily accessible for inspection, maintenance, and service.*
- *Where piping between the outdoor unit and indoor unit(s) are within allowable limits.*
- *Include space for drainage to ensure condensate flows properly out of the unit when it is in heating mode.* ⃠ *Avoid placing the outdoor unit in a low-lying area where water could accumulate.*
- *If the outdoor unit is installed in a highly humid environment (near an ocean, lake, etc.), ensure that the site is well-ventilated and has a lot of natural light (Example: Install on a rooftop).*

⃠ Do Nots

- *Where it will be subjected to direct thermal radiation from other heat sources, or an area that would expose the outdoor unit to heat or steam like discharge from boiler stacks, chimneys, steam relief ports, other air conditioning units, kitchen vents, plumbing vents, and other sources of extreme temperatures.*
- *Where high-frequency electrical noise / electromagnetic waves will not affect operation.*
- *Where operating sound from the unit will disturb inhabitants of surrounding buildings.*
- *Where the unit will be exposed to direct, strong winds.*
- *Where the discharge of one outdoor unit will blow into the inlet side of an adjacent unit (when installing multiple outdoor units).*

NOTICE

The indoor units may take longer to provide heat, or heating performance will be reduced in winter if the outdoor unit is installed:

1. *In a narrow, shady location.*
2. *Near a location that has a lot of ground moisture.*
3. *In a highly humid environment.*
4. *In an area in which condensate does not drain properly.*

Outdoor Unit Condensate Drain Piping

Outdoor unit requires condensate drain piping. Condensate drain pipe is constructed with materials approved by local code. See pages 114-118 for information in reference to outdoor unit placement.

Planning for Snow and Ice

To ensure the outdoor unit operates properly, certain measures are required in locations where there is a possibility of heavy snowfall or severe windchill or cold:

1. Prepare for severe winter wind chills and heavy snowfall, even in areas of the country where these are unusual phenomena.
2. Position the outdoor unit so that its airflow fans are not buried by direct, heavy snowfall. If snow piles up and blocks the airflow, the system will malfunction.
3. Remove any snow that has accumulated four (4) inches or more on the top of the outdoor unit.
4. In climates that will experience significant snow buildup, mount the outdoor unit on a raised, field-provided platform or stand. The raised support platform must be high enough to allow the unit to remain above possible snow drifts, and must be higher than the maximum anticipated snowfall for the location.
5. Design the mounting base to prevent snow accumulation on the platform in front or back of the unit frame.
6. Provide a field fabricated snow protection hood to keep snow and ice and/or drifting snow from accumulating on the coil surfaces.
7. Install a hail guard kit and air guide accessories (sold separately) to prevent snow or rain from accumulating on the fan inlet / outlet guards.
8. Consider tie-down requirements in case of high winds or where required by local codes.

⚠CAUTION

When deciding on a location to place the outdoor unit, be sure to choose an area where run-off from defrost will not accumulate and freeze on sidewalks or driveways, which will create unsafe conditions. Properly install and insulate any drain hoses to prevent the hose from freezing, cracking, leaking, and causing unsafe conditions from frozen condensate.

NOTICE

Choose an area where run-off from defrost mode will not accumulate and freeze on sidewalks or driveways. Properly install and insulate any drain hoses to prevent the hose from freezing, cracking, leaking, and damaging the outdoor unit.

Tie-Downs, Lightning Protection, and Wind Protection

Tie-Downs

- The strength of the roof must be checked before installing the outdoor units.
- The strength of the outdoor unit frames is adequate to be used with field-provided wind restraint tie-downs.
- If the installation site is prone to high winds or earthquakes, when installing on the wall or roof, securely anchor the mounting base using a field-provided tie-down configuration approved by a local professional engineer.
- The overall tie-down configuration must be approved by a local professional engineer.

NOTICE

Always refer to local code when using a wind restraint system.

Lightning Protection

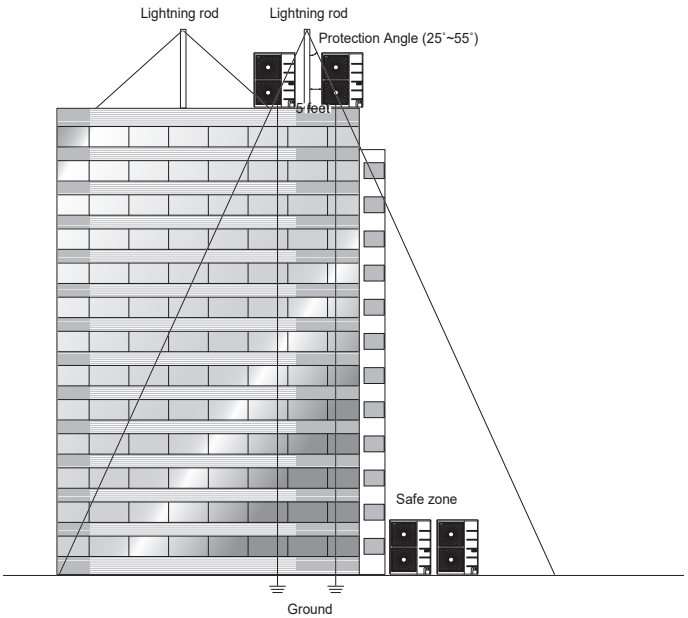
- To protect the outdoor unit from lightning, it must be placed within the specified lightning safety zone.

Table 67: Safety Zone Specifications.

Building Height (feet)	66	98	148	197
Protection Angle (˚)	55	45	35	25

- Power cable and communication cable must be installed five (5) feet away from lightning rod.
- A high-resistance ground system must be included to protect against induced lightning or indirect strike.

Figure 55: Lightning Protection Diagram (Outdoor Unit Appearances Differ According to Model).



NOTICE

If the building does not include lightning protection, the outdoor unit will be damaged from a lightning strike. Inform the customer of this possibility in advance.

PLACEMENT CONSIDERATIONS

Selecting the Best Location for the Outdoor Unit(s)

Oceanside Applications

Wind Protection

If the outdoor unit is placed on a roof, position it with the compressor end (no coil surface) in the direction of the prevailing wind as shown in the figure at right. In cooler climates, it can be beneficial to position the unit in direct sunlight to assist with defrost operations.

If the outdoor unit is not placed on a roof, place it on the leeward side of the building or in a location where the unit will not be exposed to constant wind.

If placement exposes the unit to constant wind activity, construct a wind break in front of the unit. Follow the placement guidelines set forth in "Clearance Requirements".

Figure 56: Prevailing Wind Direction.

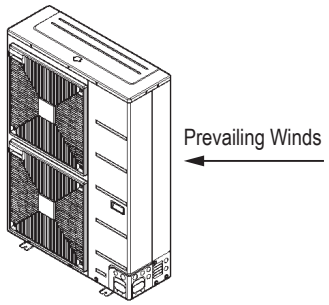
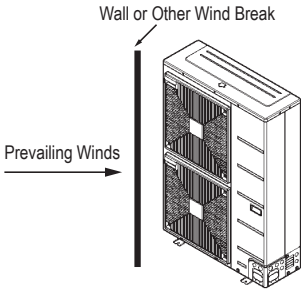


Figure 57: Leeward Side of the Building.

Figure 58: Wind Break.



Oceanside Application Precautions

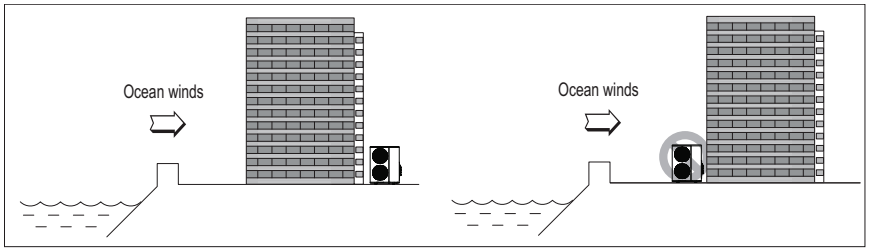
NOTICE

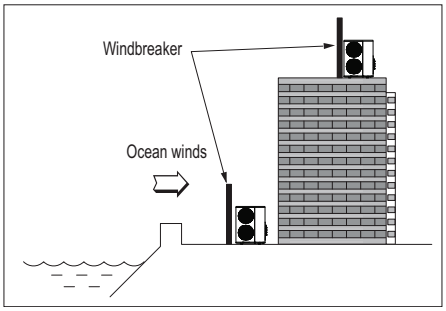
Ocean winds will cause corrosion, particularly on the condenser and evaporator fins, which, in turn could cause product malfunction or inefficient performance.

- ⃠ Avoid installing the outdoor unit where it would be directly exposed to ocean winds.
- Install the outdoor unit on the side of the building opposite from direct ocean winds.
- Select a location with good drainage.
- Periodically clean dust or salt particles off of the heat exchanger with water.

If the outdoor unit must be placed in a location where it would be subjected to direct ocean winds, install a concrete windbreak strong enough to block any winds. Windbreaker height and width must be more than 150% of the outdoor unit, and be installed at least 14 to 28 inches away from the outdoor unit to allow for airflow (depending on the location and outdoor unit size).

Figure 59: Oceanside Placement Using a Building as Shield, and Placement Using a Windbreak.





NOTICE

Additional anti-corrosion treatment will need to be applied to the outdoor unit at oceanside locations.

Minimum Allowable Clearance and Service Access Requirements

Proper clearance for the outdoor unit coil is critical for proper unit operation. When installing the outdoor unit, consider service, inlet and outlet and minimum allowable space requirements as illustrated in the diagrams below and on the following pages.

- Include enough space for airflow and for service access. If installing multiple outdoor units, ⃠ avoid placing the units where the discharge of one unit will blow into the inlet side of an adjacent unit.
- If an awning is built over the unit to prevent direct sunlight or rain exposure, make sure that the discharge air of the outdoor unit isn't restricted.
- ⃠ No obstacles to air circulation around the unit; keep proper distances from ceilings, fences, floor, walls, etc. (Install a fence to prevent pests from damaging the unit or unauthorized individuals from accessing it.)

Minimum Clearance Requirements for Multi V S Single Fan Outdoor Units

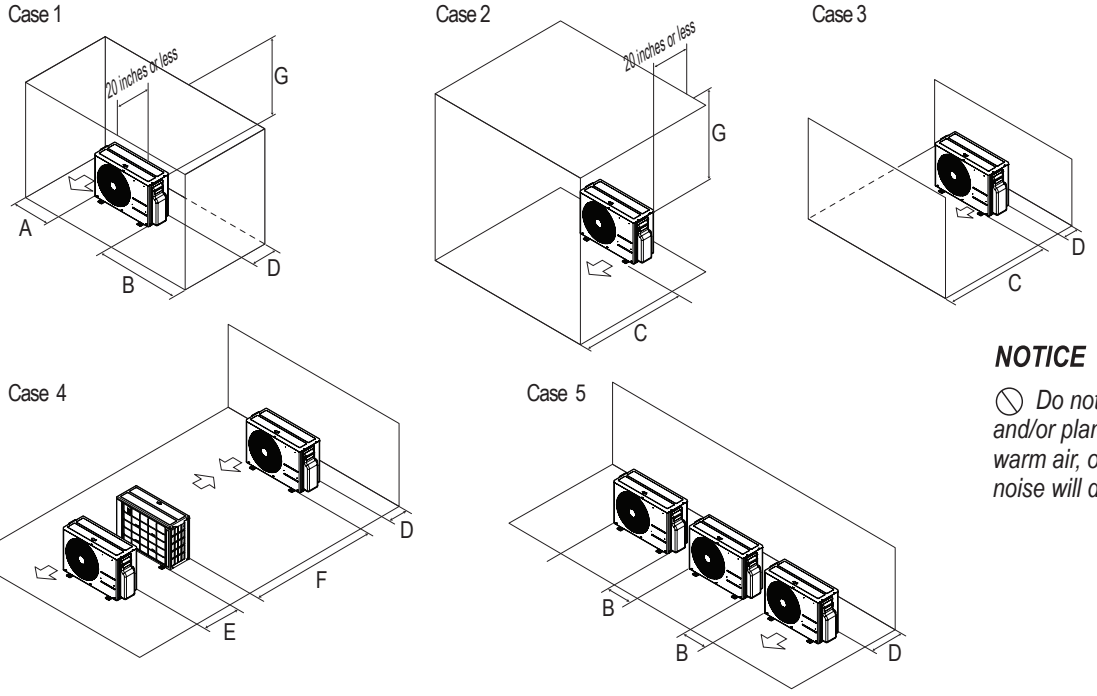
Specific clearance requirements in the diagram below are for single fan outdoor units. The figure below shows the overall minimum clearances that must be observed for safe operation and adequate airflow around the outdoor unit.

When placing the outdoor unit under an overhang, awning, sunroof or other "roof-like structure", observe the clearance requirements (as shown in Cases 1 and 2 for height in relation to the unit.. To have successful service access to the outdoor unit, see the figure below for minimum spacing. When installing multiple outdoor units, see Cases 4 and 5 for correct spacing requirements.

NOTICE

If the outdoor unit is installed between standard and minimum clearances, capacity decreases approximately 10%.

Figure 60: Single Fan Outdoor Unit Service Access and Allowable Clearances Diagram.



NOTICE

⃠ *Do not place the unit where animals and/or plants will be in the path of the warm air, or where the warm air and / or noise will disturb neighbors.*

Table 68: Single Fan Outdoor Unit Service Access and Allowable Clearances Diagram Legend.

Unit: Inch		A	B	C	D	E	F	G
Case 1	Standard	12	24	-	12	-	-	-
	Minimum	4	10	-	4	-	-	40
Case 2	Standard	-	-	20	-	-	-	-
	Minimum	-	-	14	-	-	-	40
Case 3	Standard	-	-	20	12	-	-	-
	Minimum	-	-	14	4	-	-	-
Case 4	Standard	-	-	-	12	24	-	-
	Minimum	-	-	-	4	8	79	-
Case 5	Standard	-	24	-	12	-	-	-
	Minimum	-	10	-	4	-	-	-

LG

PLACEMENT CONSIDERATIONS

Outdoor Unit Clearance Requirements

Minimum Clearance Requirements for Dual Fan Outdoor Units

Figures below and on the next page illustrate clearance requirements for various installation scenarios for dual fan outdoor units. Use the hot isle / cold isle approach when placing multiple units in close proximity to each other. Outdoor unit fans draw air from the back of the unit and discharges out the front. Place units back to back and face to face.

NOTICE

- *Installation clearances must comply with local building codes.*
- *All figures not to scale.*
- ⃠ *Never place multiple units facing back to front or front to back as shown immediately below here or high and low system pressure problems will occur.*

Figure 61: Improper Outdoor Unit Placement.

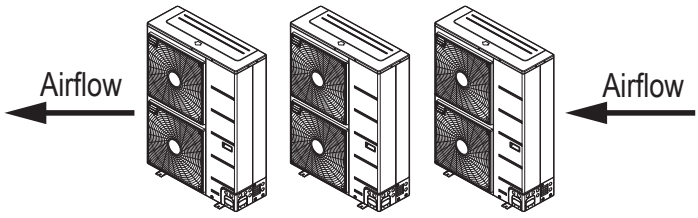
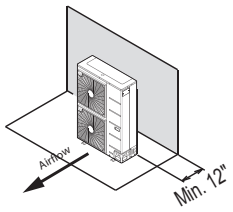
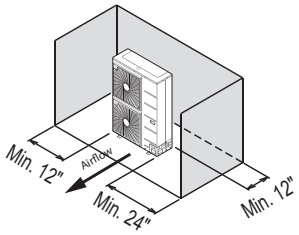


Figure 62: Proper Outdoor Unit Placement and Clearances When There Are Obstacles on the Suction Side.

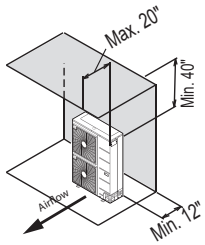
Single Unit—High Rear Wall



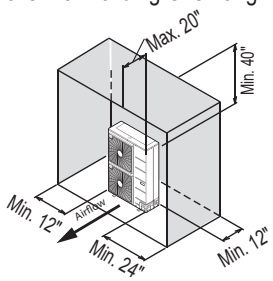
Single Unit—High Rear Wall with High Side Walls



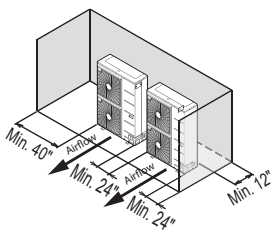
Single Unit—High Rear Wall with Building Overhang



Single Unit—High Rear and Side Walls with Building Overhang



Side by Side—High Rear and Side Walls



Side by Side—High Rear and Side Walls with Building Overhang

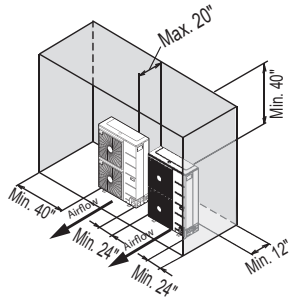
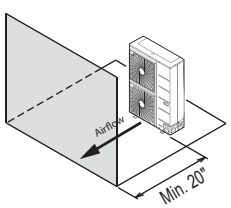
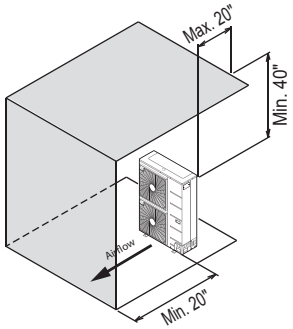


Figure 63: Proper Outdoor Unit Placement and Clearances When There Are Obstacles on the Discharge Side.

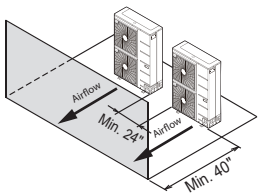
Single Unit—High Front Wall with No Side Walls



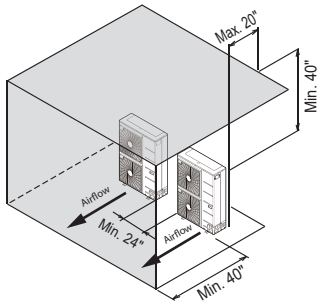
Single Unit—High Front Wall with Building Overhang and No Side Walls



Side by Side—High Front Wall with No Side Walls



Side by Side—High Front Wall with Building Overhang and No Side or Rear Walls



Minimum Clearance Requirements for Dual Fan Outdoor Units, Continued.

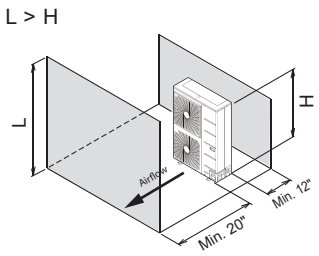
NOTICE

- *Installation clearances must comply with local building codes.*
- *All figures not to scale.*

Figure 64: Proper Outdoor Unit Placement and Clearances When There Are Obstacles on the Suction and the Discharge Sides.

When Obstacle Height of the Discharge Side is Higher than the Outdoor Unit.

Single Unit—High Rear and Front Walls with No Side Walls



Single Unit—High Rear and Front Walls with Building Overhang

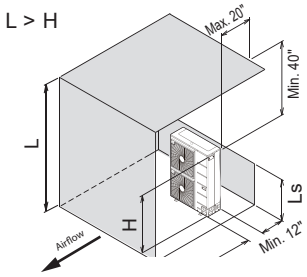


Table 69: H, A, and L Ratio.

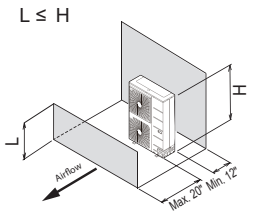
	Ls	A (Inches)
L ≤ H	0 < Ls ≤ 1/2 H	30
	1/2 H < Ls	40
H < L	Set Stand as: L ≤ H	

NOTICE

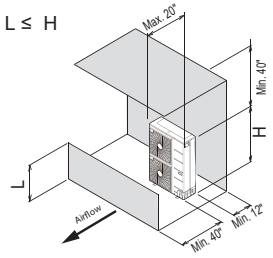
"L" must be lower than "H". If a stand is necessary, it must be made of solid material (not an open frame) to prevent the discharge air from short cycling.

Obstacle Height of Discharge Side Is Lower than the Outdoor Unit.

Single Unit—High Rear Wall and Low Front Wall with No Side Walls

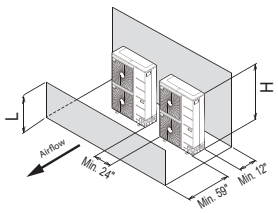


Single Unit—High Rear Wall and Low Front Wall with Building Overhang and No Side Walls



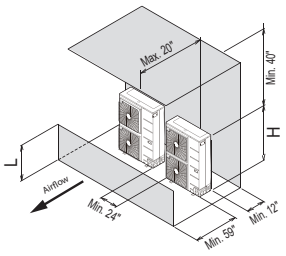
Side by Side—High Rear Wall and Low Front Wall with No Side Walls

L < H/2



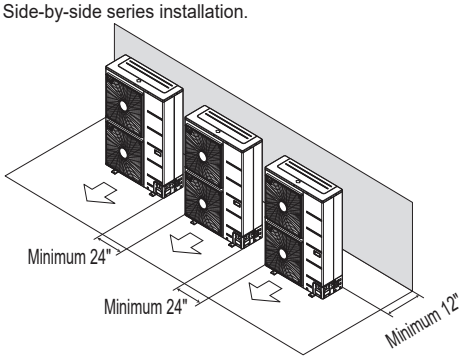
Side by Side—High Rear Wall and Low Front Wall with Building Overhang and No Side Walls

L < H/2

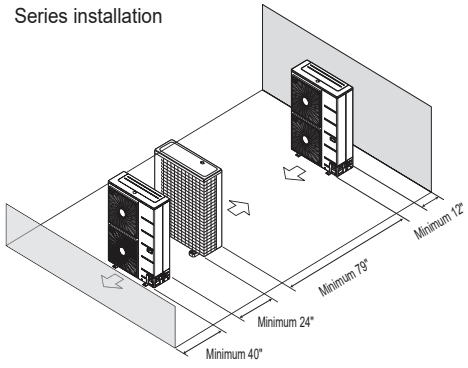


Series Installation

Side-by-side series installation.



Series installation



LG

Installing Outdoor Units Indoors

LG Multi V outdoor units are engineered to be mounted outdoors and include technology designed to minimize the negative effects of winter weather's freezing rain, sleet, and snow. Some building projects, however, necessitate placing the HVAC outdoor units indoors:

- Lack of ground space.
- Lack of an appropriate outdoor location that meets system design requirements.
- When mounting on the roof is not an option due to a lack of roof space.
- Roof warranty will be voided if mechanical equipment is placed on the membrane.
- On retrofit projects, a former chiller / boiler / air handler equipment room, mechanical area, or penthouse already exists.
- Where a project has vertical, self-contained VAV air handlers on each floor (in lieu of a centralized mechanical room).
- To curtail the potential need for redundant zone heating devices such as wall-fin radiators or duct heaters.
- In extremely cold environments where there is a significant amount of run-time at temperatures well below freezing outside the outdoor unit ambient air temperature range published in this engineering manual.

Benefits of Installing Outdoor Units Indoors

- Shelters the outdoor unit from direct exposure to prevailing winds that decrease the heating capability of the outdoor unit.
- Protects equipment from freezing precipitation and / or potential ice build-up that could hinder unit operation.
- Maintains coil heat transfer efficiency by reducing the number of and shortening the cycle time for defrost operation.
- Easier maintenance and servicing during inclement weather.
- When mounted in a fully enclosed space, limiting the ambient air temperature will allow the Multi V system designer to eliminate oversizing the outdoor unit to compensate for loss of capacity at low ambient temperatures.
- Can also curtail the need to provide inefficient redundant zone heating devices such as wall-fin radiators and second-stage ancillary heating devices.

Design Considerations Include:

- Enclosure types and elements such as louvers, rain hoods, dampers and controls, heating methods and sizing of heating devices
- Heating strategies
- Duct design
- Condensate handling

General Guidelines

- Follow ASHRAE 62.1 design guidelines.
- Depending on the project / application, a roof over the outdoor units in combination with a wind break could be all that is necessary.
- Consider the potential for snow accumulation near louvers / roof openings. Outside air intakes and discharge ducts/louvers must be engineered to clear anticipated snow accumulation levels by at least one (1) foot.
- In situations where operation is anticipated at temperatures lower than the product's minimum operating temperature, ancillary heat must be provided to heat the outdoor unit coils to ensure continuous compressor operation and heating.

It will be necessary to use an air guide accessory to prevent discharge air from short-cycling back to the coil inlet.

- Another option is to field manufacture ductwork and mount on top of the unit to encompass the outdoor unit fan discharge and connect to the exterior discharge grille on the building.
- ⃠ Avoid using a single duct on multi-fan units to prevent short cycling. Provide a dedicated duct for each outdoor unit fan discharge.
- Consider the direction of prevailing winds and opening placement. If possible, locate inlet openings upwind of discharge openings and other exhaust outlets.
- When inlet and outlet openings are placed on the same wall, minimum distance between the two openings must be approximately three (3) feet (minimum distance varies significantly with variations in outlet opening face velocity).
- If roof-mounted ventilation openings are used, strategically locate the inlet ventilation opening(s) upwind of the outlet opening(s).
- Discharge and supply ductwork must be designed to avoid weather related long periods of water entrainment.

PLACEMENT CONSIDERATIONS

Installing Outdoor Units Indoors

Provide a means to drain the condensate generated during heating mode and defrost cycle in addition to rainwater that infiltrates the inlet louver enclosed area.

- Install a field-provided drain pan under the outdoor units and provide a path to a nearby floor drain.
- If the ambient air temperature is expected to drop below 32°F in the enclosure, heat the bottom surface of the pan, drain line, and floor drain so that the condensate does not freeze before reaching the drain.

⚠CAUTION

When deciding on a location to place the outdoor unit, be sure to choose an area where run-off from defrost will not accumulate and freeze on walk-ways, which will create unsafe conditions.

Allow for ventilation intake and exhaust air based on maximum outdoor unit fan capacity.

- Select the size, type and orientation of architectural louvers with adequate “net free area” face velocity to ensure the total external static pressure from the outdoor unit fan does not exceed design limitations (see specification data tables).
- ⃠ No obstructions must be placed in front of the louver that could hamper the free flow (throw) of air.
- Roof top openings and / or discharge and supply louvers must be equipped with screens to prevent bird and insect infiltration.

As always, the best solution for each project balances acceptable heating performance (considering local weather conditions), capital costs, life cycle energy consumption, and limitations set forth by local building codes. For more detailed information on how to design indoor spaces for LG Multi V outdoor units, see the white paper “Air-Source VRF Mechanical Room Design Considerations for Outdoor Unit Placement in Enclosures” on www.lghvac.com.

NOTICE

For detailed placement considerations and installation requirements for indoor units, refer to its Indoor Unit Engineering and / or Installation Manuals.

PLACEMENT CONSIDERATIONS

Selecting the Best Location / Clearance Requirements for the Heat Recovery Unit(s)

NOTICE

Heat recovery units are for use with systems designed for heat recovery operation only (ZRUM036GSS0, ZRUM048GSS0, and ZRUM060GSS0.

Select an installation space for the heat recovery unit that meets the following conditions:

- Install the heat recovery unit indoors in a level and upright position.
- Ensure there is enough space in the installation area for service access.
- Install the heat recovery unit in a location where any sound it will generate will not disturb occupants in the surrounding rooms.
- Install so that the refrigerant piping, drainage piping, and electrical wiring system are easily accessible.

Dont's

- *Refrigerant pipes must not exceed lengths specified by LG Electronics.*
- *Do not install the heat recovery unit in a location where it would be subjected to strong radiation heat from heat sources.*
- *Avoid an installation environment where more than 80% high humidity, oil splattering, or vapor spray will occur.*
- *Avoid an installation environment where high-frequency electric noise could occur.*

Figure 65: PRHR023C, PRHR033C, and PRHR043C Clearance Requirements.

Two-, Three-, and Four-Port Heat Recovery Unit

When NOT connecting the strainer directly to the heat recovery unit.

Unit: Inch (mm)

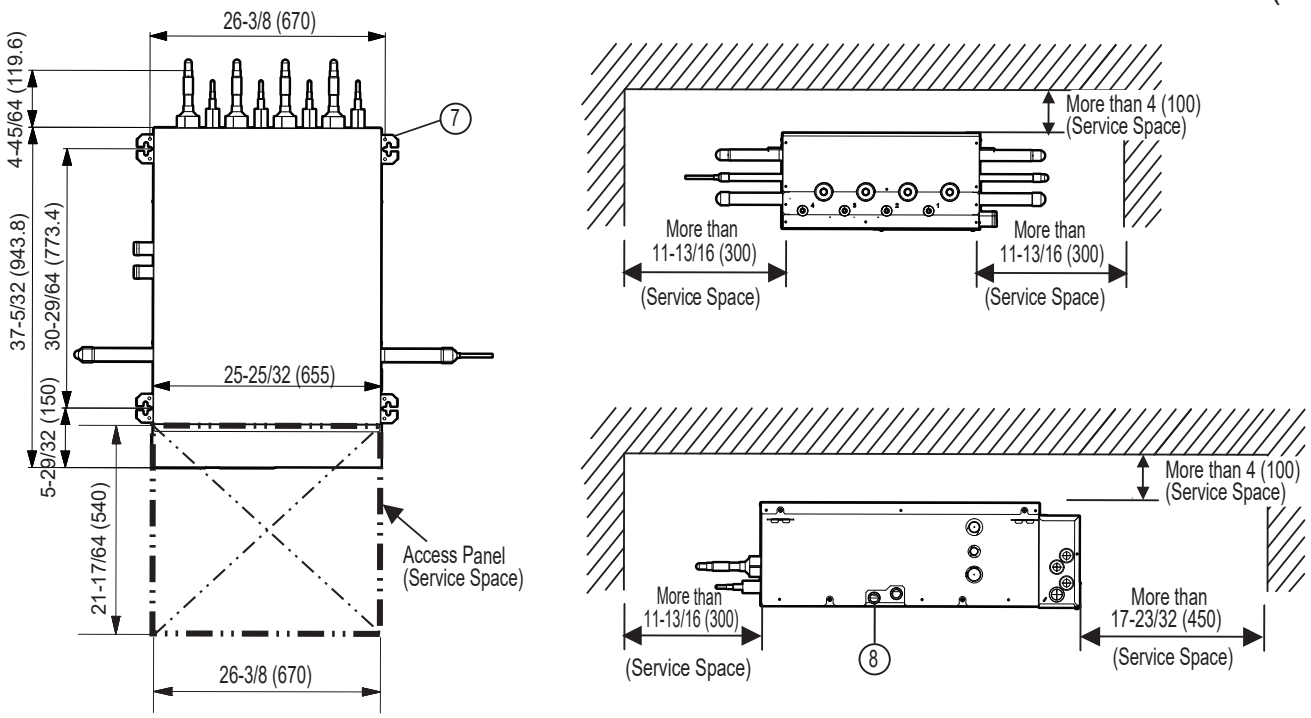


Figure 66: PRHR023C, PRHR033C, and PRHR043C Clearance Requirements, continued.

When connecting the strainer directly to the heat recovery unit (Except PRHR023C).

Unit: Inch (mm)

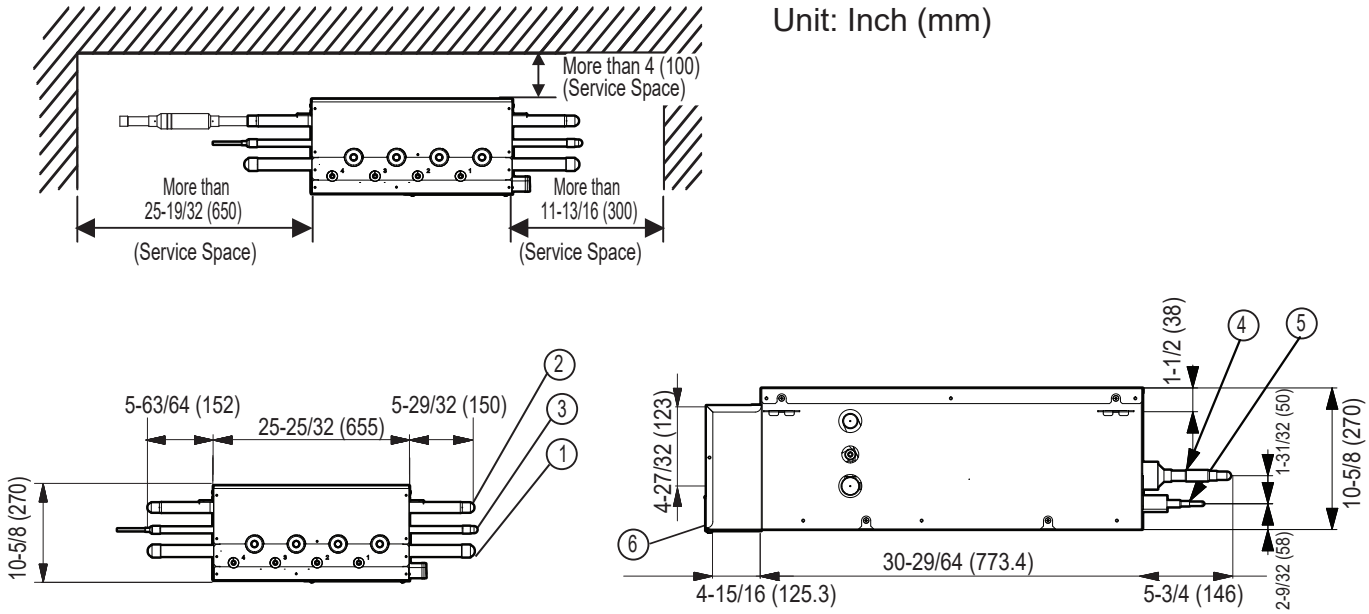
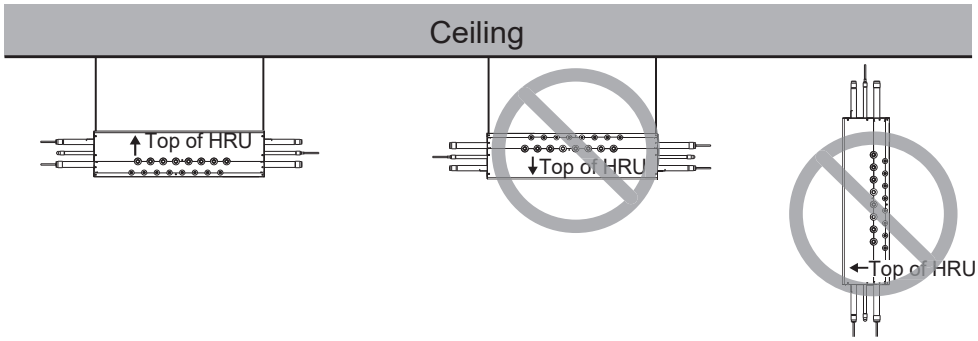


Table 70: PRHR023C, PRHR033C, and PRHR043C Heat Recovery Unit Components and Legend.

Part No.	Part Name	Connection Size (in.) / Type		
		PRHR023C	PRHR033C	PRHR043C
1	Low Pressure Vapor Pipe Connection Port	Ø7/8 Braze	Ø1-1/8 Braze	Ø1-1/8 Braze
2	High Pressure Vapor Pipe Connection Port	Ø3/4 Braze	Ø7/8 Braze	Ø7/8 Braze
3	Liquid Pipe Connection Port	Ø3/8 Braze	Ø1/2 Braze	Ø5/8 Braze
4	Indoor Unit Vapor Pipe Connection Port	Ø5/8 Braze – Ø1/2 Braze		
5	Indoor Unit Liquid Pipe Connection Port	Ø3/8 Braze – Ø1/4 Braze		
6	Control Box	–	–	–
7	Hanger Bracket	M8 or M10 Suspension Bolt		
8	Drain Hole	Connect the drain hose (field supplied), and tighten with a metal clamp (included).		

[1]Include an access panel at the side of the heat recovery unit where the control box is located.
[2]If reducers are used, service space must be increased equal to the dimensions of the reducer.

Figure 67: Install the Heat Recovery Unit Top Side Up.



NOTICE

Heat Recovery Unit must be installed so that the top side faces up. If the heat recovery unit is installed incorrectly, it may fail.

LIMITED WARRANTY (USA)

The product's full Limited Warranty terms and conditions and arbitration requirements are available at https://www.lghvac.com.

LG Air Conditioning Technologies

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