EZ Series GS

Direct Vent Gas-Fired PTAC



Perfect fit for replacing existing gas heat PTAC units and for new construction projects



MARNING

If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

Attention: This heater may be installed in the U.S. and Canada.

INSTALLER: Leave this manual with the appliance.

CONSUMER: Retain this manual for future reference.



ENGINEERING MANUAL

MANUFACTURER OF QUALITY AIR CONDITIONING AND HEATING PRODUCTS

EZ REPLACEMENT GUIDE

Original Model	Case Height	Case Width	Our Model	Original Model	Case Height	Case Width	Our Model
Amana®				Keeprite®			
PT 42 x 16 Series	16	42	42	Climette	18 5/16	32	CS
PB 26 x 16 Series	16	26	26	Seasonall	18 5/16	32	CS
American Air Filter®				Lennox®			
Enersaver Type 16	16	37 1/2	16	PTEIA Series	22 1/4	38	PT
Type 16 Hydronic	16	41 1/2	16	McQuay®			
Nelsonaire Series 25	16	36 1/2	25	C/EC	27 3/8	54 1/2	EC
American Standard®			1 1	EB Series	22	30 5/8	EB
TW Series Type 41	16	36 1/2	41	J/EJ Series	14	30	JA
Type 40 Remotaire(SR)	16 1/2	37	40	K, EK and RK Series	13 15/16	36	KF
Applied Comfort®				Type EA, ES and RS	16 3/8	44 7/8	ED
DM/DMQ	18 5/16	32	cs	Type NE	16	42	NE
SC Series	16	40	sc	Mueller®		İ	
SC Series	16	36	RM	Climatrol	16	48	UN
Carrier®				Remington®			
51PH Wallmate	18 15/16	32	cs	J/EJ Series	14	30	JA
Cartaret®	10 10,10	1	1 1	K, EK and RK Series	13 15/16	36	KF
Type 45	16 1/2	37	45	Type 41	16	36 1/2	41
Chromalox®	10 1/2	1	+ - +	Type 45	16 1/2	37	45
Space Command	16 1/2	45 1/8	СН	Simonaire®	10 17 =		1.5
CAM (2 section)	15 1/2	35 1/2	CX	SSK	16	42	RT
Chrysler®	15 1/2	36	CY	SSEZ	16	42	RT
	13 1/2	1 30	+	SSCT	16	42	RT
Climate Master®	16	26	100		10	1 42	NI NI
Climate Master Series 700AD	16	36	AD	Singer®	07.0/0		
Climate Master Series 701	16	40 1/2	C7	C/EC	27 3/8	54 1/2	EC
Climate Master Series 702, 703 & 704	16	36	CM	EB	22	30 5/8	EB
Dunham Bush®				J/EJ Series	14	30	JA
New Port III	25	52	N3	K, EK and RK Series	13 15/16	36	KF
New Port IV	25	52	N4	Type 41	16	36 1/2	41
Embassy®			1	Type 45	16 1/2	37	45
Weathertwin	16	36	RM	Type EA, ES and RS	16 3/8	44 7/8	ED
Fedders®				Slant Fin®			
Maxizone Series	16 1/4	27	MX	JK	16	42	JK
Unizone	16	48	UN	CC Monterrey	16	42	СС
Friedrich®				Monterrey	17 1/2	36	FM
Climate Master Series 700AD	16	36	AD	Suburban Dynaline®			
Climate Master Series 701	16	40 1/2	C7	Gas Unit	16	42	GS
Climate Master Series 702, 703 & 704	16	36	CM	TPI®			
ET Series	20	28	ET	Ra-Matic	16	36	RM
TE Series	16	42	TE	Weil-Mclain			
Vert-I-Pak	32	23	VP	ClimateMaster Series 700AD	16	36	AD
General Electric®				Climate Master Series 702, 703 & 704	16	36	CM
Zoneline	16	42	42	Westinghouse®			
AJ Series	16	26	26	RB Series	15	38 1/2	RB
AZ Vertical	31	23 1/4	VP	Worthington®	16	48	UN
Heil Quaker®				Zoneaire®			
SEA Series	14 1/2	35 7/8	HQ	CHP Series	18 5/16	32	CS
SHA Series	14 1/2	35 7/8	HQ	CSM Series	18 5/16	32	CS
Series C	18 5/16	32	CS	Zoneaire, RM Series	16	36	RM
Ice-Cap / Ice Air®			i	Zoneaire, SC Series	16	40	SC
RSK Series	16	36	RK	Custom Products			İ
RSCT Series	16	42	RT	Vertical Units, Fan Coils, and o	ther related	I HVAC prod	ducts.
RSWL Series	13 1/4	56 1/2	WL	(Consult with Factory)		-	
ITT Nesbitt®	1	1	 				
Challenger Series	16 1/4	42 1/4	NC				
Roomate Series - N	-	-	CY	If you don't see the unit you'r	e looking fo	r in the abo	ve list,
Modular Roomate (MW)	-	-	NR	pléase call us about having a	unit custom	designed f	or you.

TABLE OF CONTENTS

TABLE OF CONTENTS
INTRODUCTION2
Our Company
The Perfect Fit
New Construction
Retrofit/Replacement
APPLICATIONS
Economical Gas Heat
Guaranteed Quality
Application Considerations
Quiet Operation
Safety
Durable Construction
All Units Have Seacoast Construction
PRODUCT OVERVIEW (EZGS)
PRODUCT FEATURES AND BENEFITS
Slide Out Chassis
Gas Heat Exchanger –
Gas Heat Exchanger –
Ignition –
Fan Deck Assembly –
Removable Front Panel – Part Number 4082844
Discharge Grille –
STANDARD CHASSIS FEATURES AND BENEFITS7
Slinger Fan
Venturi Shroud 8
Return Air Filter – Part Number 6080066
Digital Touchpad Control or Mechanical Control 8
Motorized fresh air damper (optional) 8
Wall Sleeve – Standard Sleeve Part Number 2401135-00 9
Exterior Louver/Grilles
ORDERING DATA10
Model Nomenclature
Performance Data for EZ Series GS11
Heating Options - Available with any cooling unit 11
Electrical
PERFORMANCE DATA11
DIMENSIONAL DRAWINGS12
MINIMUM OPERATIONAL CLEARANCES13
OPTIONS AND ACCESSORIES14
Hard Wire kit – Part Number 604075614
Condensate Drain Kit – Part Number 409066114
Subbase
Lateral Duct
Unit Specifications
Installation Notes
INSTALLATION INSTRUCTIONS15
SIDEWALL VENTING REQUIREMENTS16
WALL SLEEVE INSTALLATION INSTRUCTIONS18
Framing
Preparing the Wall Opening
Block Wall Application
Panel/Curtain/Window Wall Application
Condensate Drain Kit
External Drain Installation
==

CONDENSATE DRAIN KIT	.21
Internal Drain Installation	. 22
Stamped Rear Grille	. 23
REAR GRILLE INSTALLATION INSTRUCTIONS	
Architectural Rear Grille	
SUBBASE ASSEMBLY & INSTALLATION	
Subbase Assembly & Installation	. 27
CHASSIS INSTALLATION	.29
GAS CONNECTIONS	
Gas Pipe	. 30
FRONT COVER INSTALLATION	
Install Air Filter	
Front Cover Installation	
ELECTRICAL INSTALLATION	.32
FRESH AIR VENT AND LATERAL DUCT KIT	
Fresh Air Vent	
Lateral Duct Kit	
Installing (optional) Lateral Duct	
Routine Maintenance	
MAINTENANCELIGHTING, OPERATING & SHUT DOWN	
WIRING DIAGRAMS	
USER INTERFACES	
Remote Control	
Digital Control Panel	
Mechanical Control Panel	
Wall Thermostats	
Front Desk Control	
SYSTEM CONTROLS AND MANAGEMENT	
SYSTEM MANAGEMENT SOFTWARE	
Fan Cycle Control	
Room Freeze Prevention	
High Temperature Compressor Protection	
Low Temperature Compressor Protection	
Custom Operation and Continual Room Temperature	
Monitoring	. 41
Digital Control Panel	. 42
Digital Control Panel Mechanical Control Panel	. 42 . 43
Digital Control Panel	. 43
Mechanical Control Panel Fan Mode Cooling Mode	. 43 . 43 . 43
Mechanical Control Panel Fan Mode Cooling Mode Heat Mode	. 43 . 43 . 43 . 43
Mechanical Control Panel Fan Mode Cooling Mode	. 43 . 43 . 43 . 43
Mechanical Control Panel	. 43 . 43 . 43 . 43 . 44
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44 . 45
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44 . 45 . 46
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44 . 45 . 46 . 47
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44 . 45 . 46 . 47 . 48
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44 . 45 . 46 . 47 . 48 . 49
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44 . 45 . 46 . 47 . 48 . 49 . 49
Mechanical Control Panel	. 43 . 43 . 43 . 44 . 44 . 44 . 45 . 46 . 47 . 48 . 49 . 50

Islandaire reserves the right to make changes in design and construction at any time without notice.

Introduction

OUR COMPANY

Islandaire is the fastest growing specialty air conditioning and heating manufacturer in the country. Founded in 1992 by Robert Hansen, it has grown into a multi-million dollar company in just a few short years. Islandaire builds a full complement of high quality thru-the-wall replacement air conditioners and heat pumps, water source heat pumps, and gas units in St. James, New York. Each model fits perfectly into the existing original wall sleeve assembly, thereby saving both time and money during installations.

Our Engineering, Production, Sales and Customer Service departments have been fully integrated to provide the maximum degree of user satisfaction. We at Islandaire feel that this team approach to manufacturing produces a superior overall product and assures a larger degree of flexibility in design and production scheduling to meet tight prototyping or construction timetables.

THE PERFECT FIT

Thru-wall air conditioners were developed in the late 1950's. Over the next forty years many companies engineered, manufactured and installed a variety of different units throughout the United States and Canada. Today, a number of these companies are no longer in business or have discontinued their line of thru-wall air conditioners and no longer carry replacement parts.

Islandaire offers replacement air conditioners and heat pumps that are interchangeable with units no longer available from the original manufacturer. Our units are engineered to fit perfectly within the existing wall sleeve, thereby reducing installation time and expense. They are manufactured at our modern 75,000 square foot plant on Long Island in New York.

Thank you for considering our products, The Islandaire Team

APPLICATIONS

Islandaire EZ Series GS is a replacement for the Suburban Dynaline units. Our commercial duty construction with heavy gauge galvanized steel and superior components create an efficient reliable unit. This design eliminates the need for any interior or exterior renovation. Use of the existing wall sleeve and louver saves time and money, two very important factors in today's competitive environment! If the need does occur where the duct kit, sub-base/skirt, wall sleeve and/or louver needs to be replaced, we manufacture these accessories as well. This unit is also used extensively for new construction projects, throughout the US and Canada.

The product is designed for individually-zoned, comfortcontrolled heating and cooling. The unit width is an industry standard 42". The design standards, heavy-duty construction and the focus on indoor noise reduction has created our unit as the premier unit of the future. Individually controlled PTAC units are ideal for rooms that are not occupied during vacancies, holidays, weekends or nights. Individual units allow tenants to choose the degree of comfort and operating economy.

Thermostat and fan controls are built into the digital touch pad, plus all units have the flexibility to convert to wall thermostat control, or interface into energy management systems. Whether you are designing a new structure or replacing PTAC units in an existing building, Islandaire will meet your needs.

NEW CONSTRUCTION

The Islandaire EZGS Packaged Terminal Air Conditioning (PTAC) unit is designed to meet the needs of the architect, engineer, and contractor. For unit installation, Islandaire's expert support network will assist in all applicable aspects of the construction project, from preparing a budget to start-up.

Design Flexibility for the Architect / Engineer

- Super-quiet performance, indoors and out
- No bulky duct system
- No separate equipment room
- No water towers or additional cooling equipment
- Less sensitivity to building orientation
- Optional architectural grille to permit custom exterior appearance
- Integral CO detector alarm available

Lower Operating Costs & Reliable Comfort for the Occupant

Islandaire helps lower utility costs with energy efficient units that exceed industry standards. Energy savings are achieved in both heating and cooling environments through efficient mechanical design and onboard electronic logic. Separate indoor and outdoor fans provide lower operating costs. Energy management software is built into the unit's standard digital controls.

These units may also qualify for electrical power company rebates. (Consult your local utility provider for rebate opportunities.)

RETROFIT/REPLACEMENT

Islandaire PTAC units are engineered to fit perfectly within most existing wall sleeves, thereby reducing installation time and expense. There is no time wasted on redesigning an existing wall opening or removing an old wall sleeve. Just slide the old chassis out and replace with a new one from Islandaire.

EZ Quick connections to the control box simplify electrical hook-up, and our slide-out chassis eases installation into the wall sleeve. Rapid servicing reduces downtime; the complete chassis can be replaced in minutes without disrupting other occupants.

APPLICATIONS (cont.)

ECONOMICAL GAS HEAT

Islandaire EZGS PTAC units provide high-efficiency gas heat. Gas-heated air is much warmer than conventional heat pump units, allowing the unit to reach set temperature levels much faster. The compressor operates only during the cooling cycle, reducing noise and extending the life of the compressor.

Guaranteed Quality

Each Islandaire unit is designed to operate quietly and efficiently and is backed by the best warranty program available. Our standard warranty is for one year parts and labor, including a five year compressor part only warranty and a lifetime warranty on the heat exchanger part only OR a two year parts only warranty, including a five year compressor part only warranty and a lifetime warranty on the heat exchanger part only.

Whether it is an exact replacement unit or a new construction project, Islandaire is the smart choice for all your air conditioning and heating needs.

APPLICATION CONSIDERATIONS

It is important for air conditioning systems to be properly sized for each application in order to achieve desired temperature and humidity levels. It is strongly recommended that a professional engineer match the PTAC unit with the building structure and climate.

The following application considerations are all important in choosing the proper PTAC system for the building structure.

UNDERSIZING

If a PTAC unit is undersized (cooling capacity is less than required capacity for an application), the unit will not be able to cool the space down to the desired temperature during very hot days.

OVERSIZING

If a PTAC unit is oversized (cooling capacity is greater than required capacity for the specific application), the unit will cool the space down to the desired temperature too quickly creating a cool, yet excessively humid space.

AIR INFILTRATION

Excessive air infiltration can intensify problems associated with under-sizing or over-sizing a PTAC unit. This can be the cause of insufficient cooling, dehumidification, or heating. Sources of air infiltration include vents, gaps around windows and doors, and improperly sealed floors, ceiling or wall joints.

PRODUCT OVERVIEW (EZGS)

QUIET OPERATION

The dual wheeled fan deck assembly used in our EZGS units provides whisper quiet operation while delivering maximum airflow required for proper air circulation. Separate indoor and outdoor fan motors further reduce operating sound levels and costs.

The heavy gauge construction of the chassis and cabinet minimizes vibration for quieter operation. Vibration isolators on the rotary compressor keep it running smoothly and quietly. The unit bulkhead is fully insulated to decrease outdoor sound transmission.

The compressor is isolated to minimize vibration and sound transmission for quiet operation.

SAFETY

The EZGS unit employs a solid-state, electronic, hot surface ignition (HSI) with no open flame. This eliminates the need for pilot lights. HSI increases energy efficiency while ensuring safety.

DURABLE CONSTRUCTION

- This Islandaire Series PTAC unit is built with durable, quality components designed for continuous operation in all environments.
- · Our wall sleeves are constructed of thick 18-gauge steel with a tough baked-on finish for maximum durability.
- The outdoor fan motor is totally enclosed, preventing damage from moisture and debris introduced by extreme weather conditions. Both indoor and outdoor fan motors are permanently lubricated for extended life.
- Electrical components are located on the indoor side of the wall protecting them from driving rain and humidity.
- The compressor is a reliable, high-efficiency design rotary compressor. It is hermetically sealed and designed for continuous operation.
- Stainless steel tubular heat exchanger

ALL UNITS HAVE SEACOAST CONSTRUCTION

Application of air conditioning equipment in a corrosive environment requires special consideration. The corrosive nature of salt water vapor, chlorine and acid vapor, demands a unit that can withstand these environments. Any metal portion that is exposed to a corrosive vapor must be specially treated.

All Islandaire PTAC units have special corrosion protection that can help dramatically extend the life of the unit. Listed below are just some of the components that feature corrosion protection:

- Wall Sleeve The entire wall sleeve is constructed of 18-gauge steel. Treated inside and outside with a baked-on based powder coat paint to protect it from the corrosive effects of salt spray.
- Base Pan Base pan has a corrosion resistant coating to protect it from the elements.
- Condenser Coil Protective coating applied to the coil to prevent corrosion and weathering.
- Condenser Fan Blade Constructed of strong, engineered plastic that has excellent flame resistance and dimensional stability over a wide range of service temperatures.
- **Condenser Fan Motor** Specially coated by the manufacturer.
- **Compressor** Protective coating applied by the manufacturer on the exterior to enhance equipment life and performance.
- Outdoor Louver Made of aluminum, etched and anodized for maximum corrosion protection. Available in stamped or architectural styles. Can be painted in a wide choice of colors.

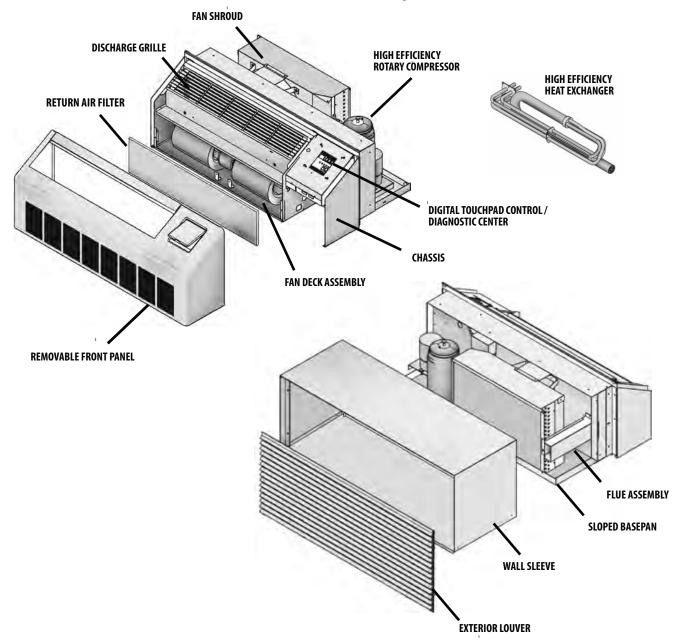
Standard on All Models:

Corrosion protection treatment shields the EZGS unit from corrosive environments and extends the life of the unit, especially in coastal locations.

PRODUCT FEATURES AND BENEFITS

- Proudly Assembled in the U.S.A.
- ETL/CSA listed products
- Superior Energy Efficiency Ratios (EERs)
- · Commercial duty construction with heavy gauge galvanized steel
- Designed for exact replacement of existing sleeve opening
- Energy efficient rotary compressors
- P.S.C. evaporator and condenser motors
- · High-efficiency refrigeration coils used to provide superior heat transfer

- Units available as cooling only, Cooling with Natural Gas Heat or L.P. Gas Heat
- Custom options available
- · Solid state, electronic hot surface ignition system
- · Available with wired and wireless wall thermostats
- NYC MEA number 358-93-E VOL. II
- Sealed combustion chamber
- All air for combustion is derived from the outside atmosphere and all flue gasses are discharged directly to the outside atmosphere.
- Integral CO detector alarm available

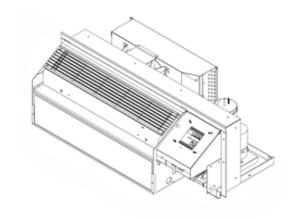


STANDARD CHASSIS FEATURES AND BENEFITS

SLIDE OUT CHASSIS -

- Slide-out chassis makes installation simple
- All components are readily accessible to service personnel
- On-board diagnostic software and display help diagnose potential problems
- Isolated rotary compressor design for continuous efficient, reliable and quiet operation

See page 29 for chassis installation instructions



GAS HEAT EXCHANGER -

- Stainless steel tubular
- Provides economical gas heating
- Available in Natural Gas or LP Gas

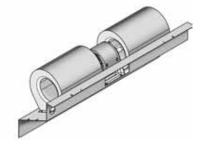
IGNITION –

- Electronically controlled hot surface ignition
- No pilot light saves gas and ensures safety



FAN DECK ASSEMBLY -

- Creates extremely quiet indoor operating environment
- Generates a balanced and constant airflow into the room

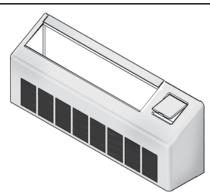


REMOVABLE FRONT PANEL - Part Number 4082844

- 18-gauge steel with powder coated paint for maximum protection
- Quick removal ensures shorter installation time and faster servicing
- · Easy access to removable filters

DISCHARGE GRILLE -

· Constructed of extruded aluminum, easy to clean and maintain See page 31 for front cover installation instructions



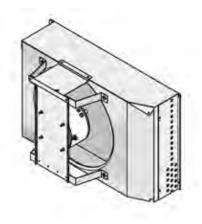
STANDARD CHASSIS FEATURES AND BENEFITS (cont.)

SLINGER FAN

- Curved fan blades increase airflow across the outside coil
- Creates a quiet operating environment outside the building
- Slinger ring efficiently removes condensate and increases cooling

Venturi Shroud

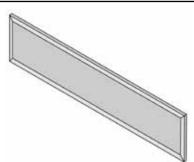
- Works with the fan to maximize air flow and increase efficiency
- Removes easily for quick access when cleaning condenser coil



RETURN AIR FILTER - Part Number 6080066

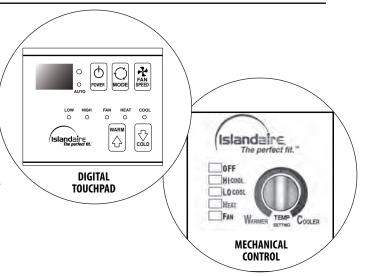
- Easily removable from the unit for cleaning
- Filters the circulated air inside the room
- Keeps the system clean and working efficiently
- Clean filters increase life of the system components

See page 36 for maintenance information



DIGITAL TOUCHPAD CONTROL OR MECHANICAL CONTROL

- Reliable and easy to operate
- Continuous or cycle indoor fan operation
- Works with hand held remote control and/or wall thermostat
- Digital Controls Easy to read LED diagnostics
 - Sensors in the unit continually monitor the indoor coil, outdoor coil, and outdoor air conditions. If abnormal conditions are detected, an error code is displayed, removing the guess work in troubleshooting a unit.



MOTORIZED FRESH AIR DAMPER (optional)

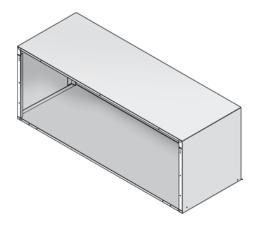
• The optional motorized fresh air damper effortlessly allows you to add fresh air into the room. When the Fresh Air switch is in the ON position, the damper door opens and allows fresh air to be drawn in from outside. When the damper door switch is in the OFF position, the damper door is closed and does not allow outdoor air to enter.

STANDARD CHASSIS FEATURES AND BENEFITS (cont.)

WALL SLEEVE – Standard Sleeve Part Number 2401135-00

- Thick insulation on the top and sides to reduce noise and increase efficiency
- Heavy-gauge (18 gauge) steel with powder paint coating for maximum scratch, dent and corrosion resistance.
- Custom wall sleeve depths available
- Brick stop flange and support legs available as an option

See page 18 for wall sleeve installation instructions



EXTERIOR LOUVER/GRILLES

- Architectural extruded aluminum grille, Part Number 6070422
- Custom colors available (Ask for our color chart sheet)
- Recessed available

See page 23 for exterior grille installation instructions



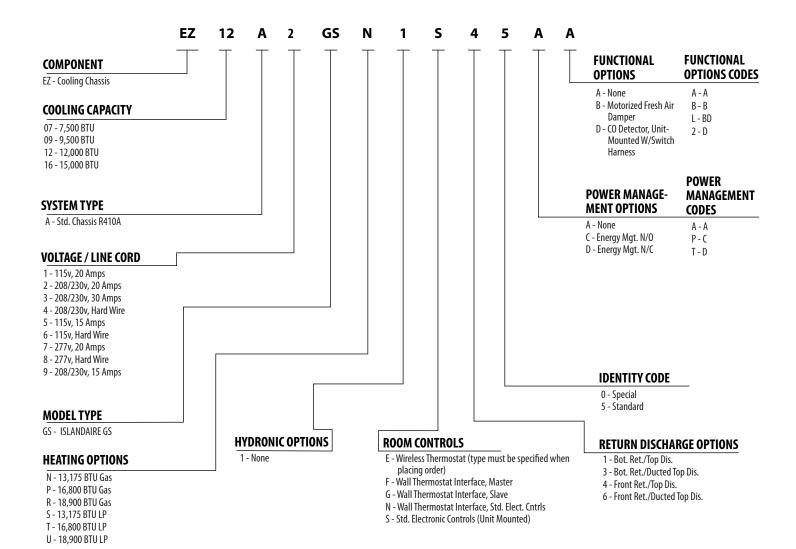
ORDERING DATA

MODEL NOMENCLATURE

The EZ Series GS units are available in four cooling capacities: 7,000 BTUH, 9,500 BTUH, 12,000 BTUH, and 15,000 BTUH; and in three voltage input options: 115V, 208/230V, and 277V. The control choices are vast. We offer a unit-mounted digital control, multiple wired, wall-mounted heating/cooling thermostats, and a wireless wall thermostat with occupancy sensor control. Please review the nomenclature/model number breakdown below for the EZ Series GS options.

NOTE

Note: 277V units must have a permanent wiring connection. This requirement can be met either by using a subbase for concealed cord connection or by direct wiring using a hard-wire kit.



PERFORMANCE DATA

Performance Data for EZ Series GS

MODELS											
		EZ07			EZ09			EZ12		EZ16	i
VOLTS	115	208 / 230	277	115	208 / 230	277	115	208 / 230	277	208 / 230	277
BTUH COOL	7,200	7,000 / 7,200	7,200	10,000	9,800 / 10,000	9,800	12,200	12,000 / 12,200	12,000	14,300 / 14,500	14,300
AMPS COOL	5.26	2.84 / 2.63	2.18	7.91	4.25 / 3.96	3.19	10.22	5.55 / 5.11	4.17	6.80 / 6.30	5.11
WATTS COOL	605	590 / 605	605	910	885 / 910	885	1,175	1,155 / 1,175	1,155	1,415 / 1,450	1,415
EER	11.9	11.9 / 11.9	11.9	11.0	11.1 / 11.0	11.1	10.4	10.4 / 10.4	10.4	10.1 / 10.0	10.1
CFM HIGH	360	340 / 375	360	360	340 / 375	360	360	340 / 375	360	360 / 360	360
CFM LOW	260	240 / 275	260	260	240 / 260	260	340	320 / 340	340	320 / 340	340
NOISE INDOOR/ OUTDOOR (DBA)	45/69	45/69	45/69	45/69	45/69	45/69	45/69	45/69	45/69	45/69	45/69
REFRIGERANT (TYPE)	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
SHIPPING WEIGHT (LB)	180	180	180	180	180	180	180	180	180	180	180

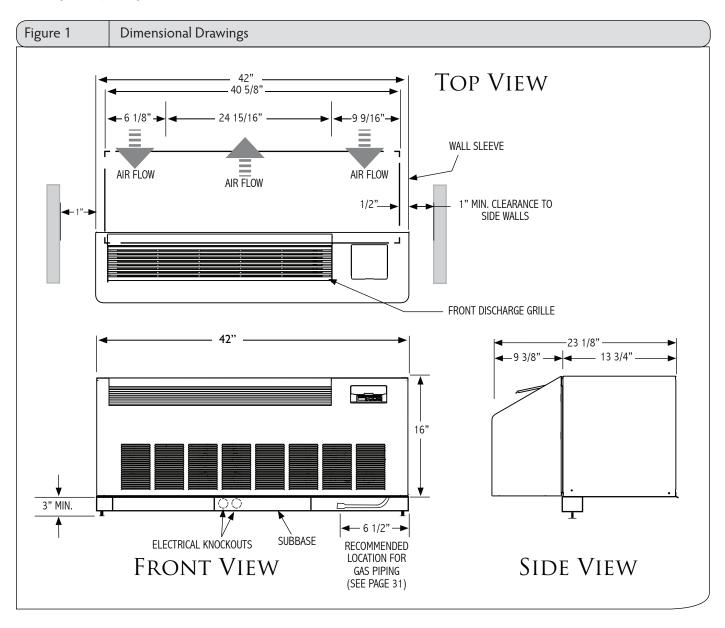
	N & S			P&T			R&U					
INPUT BTUH HEAT	15,500	15,500	15,500	15,500	20,000	20,000	20,000	20,000	22,500	22,500	22,500	22,500
OUTPUT BTUH HEAT	13,175	13,175	13,175	13,175	16,800	16,800	16,800	16,800	18,900	18,900	18,900	18,900
VOLTS	115	208	230	277	115	208	230	277	115	208	230	277
WATTS HEAT	143	150	166	166	143	150	166	166	143	150	166	166
THERMAL EFFICIENCY	85.0	85.0	85.0	85.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
AMPS HEAT	1.24	0.72	0.72	0.60	1.24	0.72	0.72	0.60	1.24	0.72	0.72	0.60

ELECTRICAL

	EZGS						
LINE VOLTAGE	115	208/230	208/230	208/230	277		
MAXIMUM AMPERAGE	16	12	16	24	16		
WALL SOCKET CONFIGURATION					•		
RECEPTACLE NUMBER	NEMA 5-20R	NEMA 6-15R	NEMA 6-20R	NEMA 6-30R	NEMA 7-20R		
ELECTRICAL HEAT OPTIONS	N/A	N/A	N/A	N/A	N/A		

DIMENSIONAL DRAWINGS

Units must be installed in accordance with all applicable codes. Ensure there is adequate clearance for servicing and proper operation. A minimum of 18 inches in front of the chassis is required. Provide additional space for service technician to work on the unit. Ensure that drapes, bed, bedspread, furniture, etc. DO NOT block either return or discharge air openings.



MINIMUM OPERATIONAL CLEARANCES

Outdoor Clearances

The following minimum outside clearance from rear grille must be maintained:

- Rear of unit to nearest obstruction 36"
- Side of unit to nearest obstruction 0"
- Bottom of unit to obstruction and/or ground: This requirement is determined by local climate and environmental conditions. The unit must be above ground and high enough off of the ground to prevent snow, water, leaves or any other obstruction from blocking rear of unit.

Indoor Clearances

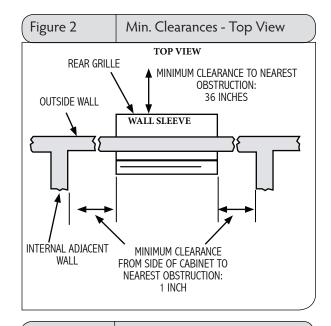
The following minimum inside clearances from cabinet front must be maintained:

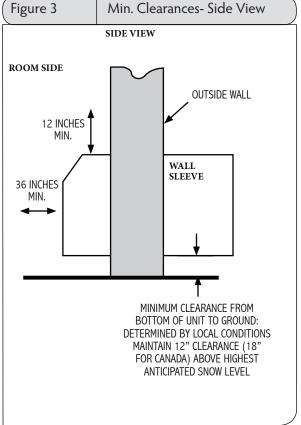
- The flow of discharge air must not be obstructed for a minimum of 12"
- Side of cabinet to nearest obstruction 1"
- Top of unit to ceiling 12"
- Cabinet front to nearest obstruction 36" (12" if obstruction is removable for service of unit.)
- Bottom of cabinet front to finished floor 0"

Minimum Clearances to Combustible Construction

Units are approved for 0" clearance to combustible construction top, sides and bottom.

Front and rear clearances not applicable as there can be no construction combustible or non-combustible to the front or rear of the opening.





OPTIONS AND ACCESSORIES

HARD WIRE KIT - Part Number 6040756

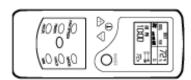
- Used in place of a plug-in power cord
- Connects unit directly to building mains
- All 265V units require either a hard wire kit or electric subbase

See page 32 for electrical information



REMOTE CONTROL - Part Number 6040694

- Ability to control PTAC from anywhere in the room
- · Large full function display
- Operates on two AA batteries



CONDENSATE DRAIN KIT - Part Number 4090661

- Attaches to wall sleeve base pan to control condensate removal
- Can be adapted for left or right side exterior drainage or internal drain con-

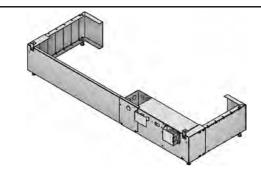
See pages 21 & 22 for drain kit installation instructions



SUBBASE

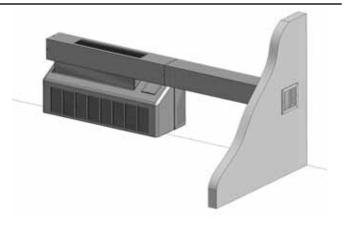
- Provides secure enclosure for electrical connections
- Provides structural support for units that extend into the room
- Includes leveling legs for support and precise adjustment

See pages 27 & 28 for subbase installation instructions



LATERAL DUCT

- Allows the air from one PTAC unit to be shared by an adjacent room.
- The kit mounts to the top of the unit and can be configured for either right or left discharge



INSTALLATION INSTRUCTIONS

Unit Specifications

This appliance is intended for new construction or retrofit replacement of most 42" x 16" Package Terminal Air Conditioners. Confirm the electrical rating of this appliance matches the electrical supply available before beginning installation (refer to table on page 11).

The efficiency rating of this appliance is a product of thermal efficiency rating determined under continuous operating conditions and is determined independently of any installed system.

Due to high temperatures, the appliance should be located out of traffic and away from furniture and drapes. Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition. Young children should be carefully supervised when they are in the same room as the appliance. Clothing or other flammable material should not be placed on or near the appliance. Any safety screen or guard removed for service must be replaced before operating the appliance. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners, and circulating air passageways of the appliance be kept clean.

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person.

Safety Information

- A. This appliance does not have a pilot. It is equipped with an ignition device, which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. If your unit uses LP (propane), be sure to smell next to the floor because LP (propane) gas is heavier than air and will settle on the floor.
- C. Use only your hand to turn the gas valve knob. Never use tools. If the knob will not turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system and any gas valve, which has been under water.

INSTALLATION NOTES

CAUTION! To prevent damage, this unit should NOT be operated to provide supplementary heating and cooling during the construction period. The unit is designed for operation in a normal indoor environment. Operating this unit in an unenclosed space or exposure to construction environment may result in permanent equipment damage.

Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the appliance.

When installed in the appropriate wall sleeve, this appliance has zero clearance to combustible construction.

The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during pressure testing of that system at test pressures in excess of ½ psi. The appliance must be isolated from the gas piping system by closing equipment shutoff valves during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi.

The gas-fired heating design of this appliance requires that the installation of this appliance must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54 and/or National Gas and Propane Installation Code, CSA B149.1. This appliance is only for use with the type of fuel indicated on the rating plate. This appliance is not convertible for use with other gases.

minimum 5" W.C., maximum 14" W.C. Inlet gas pressure: Natural Gas:

minimum 11" W.C., maximum 14" W.C. Liquefied:

(Minimum inlet pressures must be maintained for purposes of adjustment.)

SIDEWALL VENTING REQUIREMENTS

Confirm that Code-stipulated vent terminal positioning restrictions for minimum clearance distances to grade level below the rear of the wall sleeve, gas and electric meters, regulators, and relief equipment or adjacent public walkways, adjacent buildings, openable windows, and other building openings are consistent with local codes and/or ANSI-Z223.1 and/or CSA B149.1. The ANSI Z223.1 specifications include the following:

The vent terminal shall terminate at least 3 feet above any forced air inlet located within 10 feet. This provision does not apply to the combustion air intake of a direct vent appliance. See Figure 4 Sidewall Venting Requirements.

- The vent terminal shall be at least 1 foot above 1. grade.
- The vent system of a direct vent appliance with an input of 50,000 BTU/H or less shall be located at least 9 inches from any openings through which flue gases can enter.
- Vent terminals shall not terminate over a public walkway or over an area where condensate or vapor cloud could create a nuisance or hazard or could be detrimental to the operation of regulators, relief valves, or other equipment.

CAUTION

Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

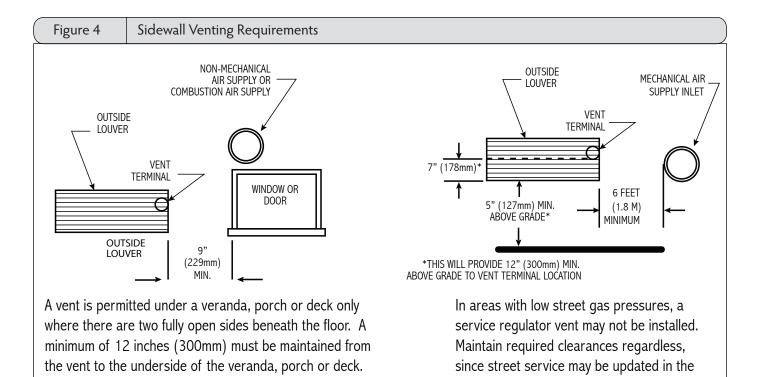
EXCEPTIONS FOR INSTALLATION IN CANADA

- The vent terminal shall be located at least 1 foot from any window or door which can be opened in any building, any non-mechanical air supply inlet to any building, or the combustion air inlet to any other appliance.
- The vent terminal shall be located at least 6 feet from any mechanical air supply to a building.
- The vent terminal shall not terminate above a meter/ regulator assembly within 3 feet horizontally of the vertical center line of the regulator and shall be at least 3 feet from any gas service regulator vent outlet or electrical device.
- The vent terminal shall not terminate less than 7 feet above a paved sidewalk or a paved driveway located on public property.
- The vent terminal shall not terminate directly above a paved sidewalk or a paved driveway, which is located between two single-family dwellings.
- The vent terminal shall not terminate underneath a porch, veranda, or deck unless the veranda, porch, or deck is open on a minimum of two sides beneath the floor, and the distance between the top of the vent terminal and the underside of the veranda, porch, or deck is at least 1 foot.

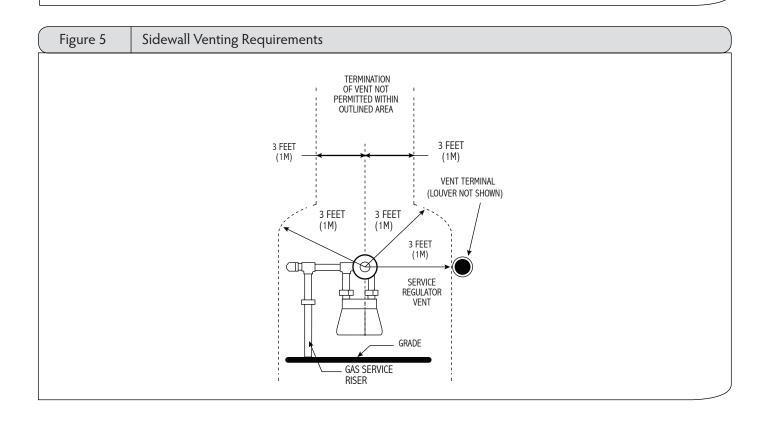
CAUTION

The installer is to ensure that adequate combustion and ventilation air is provided.

SIDEWALL VENTING REQUIREMENTS (cont.)



future.



This vent must be fitted with a cap in accordance with the

vent manufacturer's installation instructions.

WALL SLEEVE INSTALLATION INSTRUCTIONS

FRAMING

Proper building practices must be used when constructing a wall opening to support a PTAC wall sleeve and chassis. Units must be installed in accordance with all applicable codes.

For installation of retrofit replacement package terminal air conditioners.

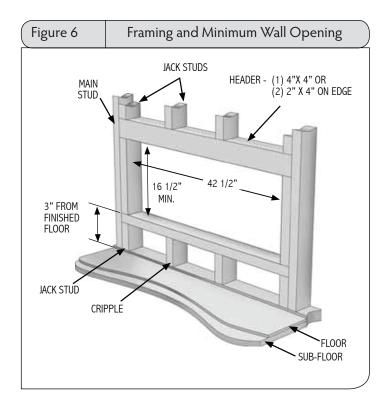
This unit will fit most existing 42" x 16" type wall sleeves by removing the existing front cabinet and air conditioner. If using the existing wall sleeve and outdoor louver, they must be inspected to ensure satisfactory condition prior to unit installation, and louver design must be approved by the Islandaire Engineering Department.

For installation of new construction

A wall sleeve must be installed through a 42-1/2 inch wide x 16-½ inch high hole in the exterior building wall. See Figures 6, 7, and 8 for wall sleeve framing dimensions.

Preparing the Wall **OPENING**

- 1. Once a satisfactory location is found and height of unit is determined, create a wall opening to install the wall sleeve. The rough opening should measure a minimum of 16 1/2" high x 42 1/2" wide.
- When construction is complete, check the wall opening to be sure the wall sleeve will slide into the opening without obstruction.
- If installed in a concrete or masonry wall, a lintel must be provided in the wall opening for support.
- Do not use the wall sleeve as a lintel.
- When installed in the opening, the wall sleeve must be horizontally level from side-to-side and pitched (one quarter bubble in the sight glass) to the outside if unit is to drain outside.
- The installer must determine and supply the mounting bolts and/or screws to attach the wall sleeve to the sides of the wall opening. Make sure the wall opening is adequate for strong support.



NOTE

Units approved for 0" clearance to combustible constructions top, sides, and bottom. Front and rear clearance not applicable as there can be no construction combustible or non-combustible to the front or rear of the opening.

- The installer must provide adequate sealing and insulation around the sleeve after it is installed.
- If used, a wall receptacle must be located within 58 inches of the lower right sleeve corner. Extension cords must not be used with the unit.
- For installations in walls deeper than 13-7/8 inches, special care is necessary to prevent problems with rain water, condensate drainage and intake/discharge air. Consult with your Sales Representative before attempting such installations.

WALL SLEEVE INSTALLATION INSTRUCTIONS (cont.)

BLOCK WALL APPLICATION

The wall sleeve will need to be installed so that the sleeve projects into the room a minimum of 1.25 inches and a maximum of 11.5 inches.

The wall sleeve will need to be installed so that the sleeve projects beyond the exterior wall a minimum of 0.25 inches.

When installed in the appropriate wall sleeve, this appliance has zero clearance to combustible construction.

The minimum required clearance distance between the wall sleeve and finished floor is 3.0 inches. Wall sleeve installations that project into the room 4.5" or more require the use of Leveling Legs or other means of supporting the wall sleeve.

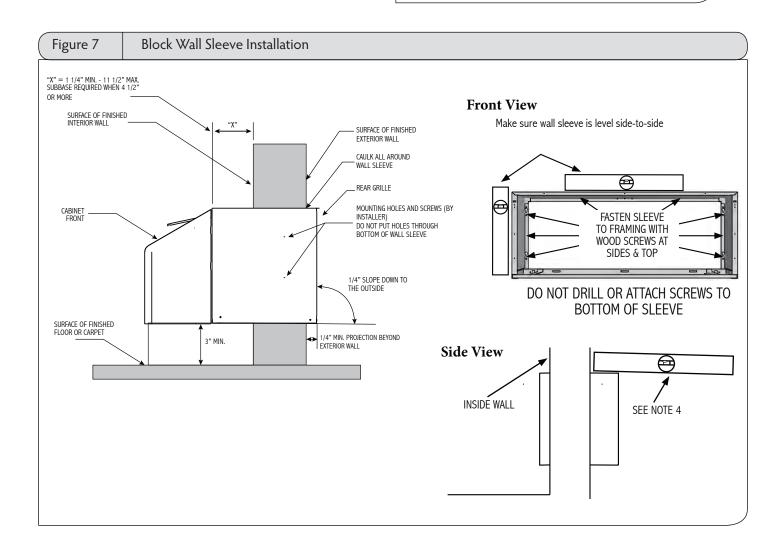
Block Wall Installation

Secure the wall sleeve to the surrounding studs by drilling two 1/8 inch diameter holes through both sides approximately in the center of studs using 3/4 inch pan head type screws supplied. Shim if necessary to prevent the sleeve from bowing. Make sure the wall sleeve is level from side-to-side and sloped 1/4 inch from front-to-rear. DO NOT DRILL HOLES IN THE BOTTOM OF THE SLEEVE, WATER DAMAGE WILL OCCUR.

Seal around the outside portion of the wall sleeve using weatherproof caulking to form a seal against rain, snow, and air leakage.

CAUTION

Do not slope the wall sleeve toward the room.



WALL SLEEVE INSTALLATION INSTRUCTIONS (cont.)

PANEL/CURTAIN/WINDOW WALL APPLICATION

Clearances and Projections

The wall sleeve will need to be installed so that the sleeve projects into the room a minimum of 1.25 inches and a maximum of 11.5 inches.

The wall sleeve will need to be installed so that the sleeve projects beyond the exterior wall a minimum of 0.25 inches.

When installed in the appropriate wall sleeve, this appliance has zero clearance to combustible construction.

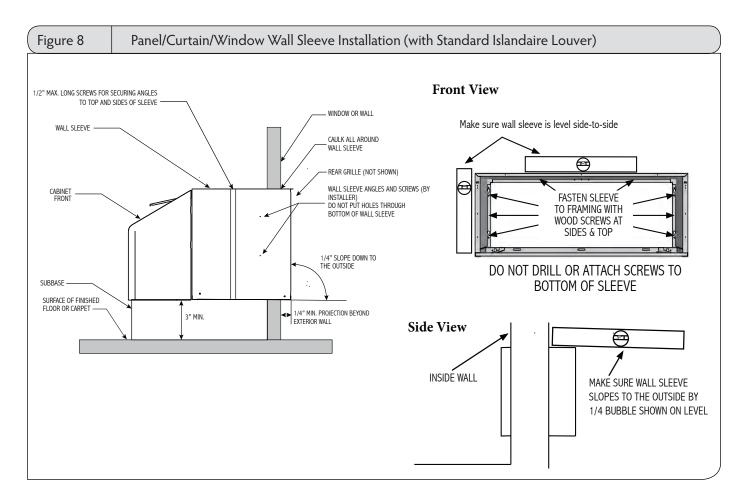
The minimum required clearance distance between the wall sleeve and finished floor is 3.0 inches. Wall sleeve installations that project into the room 4.5" or more require the use of Leveling Legs or other means of supporting the wall sleeve.

Window/Panel Wall Installation

For installations in windows and/or curtain or panel walls of 2", it is suggested that a subbase or leveling legs kit be installed under wall sleeve.

To attach wall sleeve to the inside wall, field supplied wall sleeve angles 1" x 1" x .065/.055 are to be used on top and sides of wall sleeve.

Seal around the outside portion of the wall sleeve using weatherproof caulking to form a seal against rain, snow, and air leakage.



CONDENSATE DRAIN KIT

CONDENSATE DRAIN KIT

Part Number 4090661

An indoor/outdoor drain kit is available as an accessory item. When a drain kit is to be installed, do so before installing the wall sleeve in the wall.

During periods of high humidity and/or during heat pump operation, condensate water will collect in the bottom pan of the chassis. When the chassis bottom pan is full, the water will overflow into the wall sleeve and out the drainage holes on the back edge of the wall sleeve.

The Condensate Drain kit contains an overflow tube to direct excess condensate water from the bottom of the sleeve to either an internal or external drainage path. Because heat pumps generate condensate even during the heating season, it is recommended to always use a drain kit with heat pump models. Determine whether the kit should be installed as an internal or external drain system.

EXTERNAL DRAIN INSTALLATION

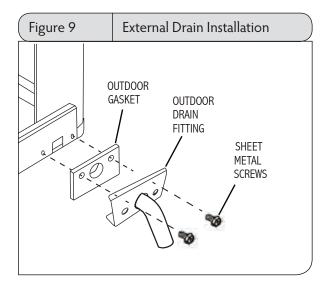
The drain kit can be installed as an external drain on the left or right side drain opening on the sleeve. Determine which drain opening will provide the best drainage for the installation.

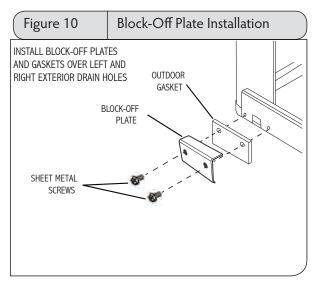
Local codes will determine the proper method for condensate disposal. The drain kit must be installed before installation of the wall sleeve condenser grille.

- Remove the cardboard weather board from the wall sleeve.
- 2. Install the outdoor drain fitting and one of the outdoor drain fitting gaskets over one of the drain holes on the rear of the wall sleeve. Secure this assembly to the rear of the sleeve with two sheet metal screws into the holes provided in the wall sleeve.
- 3. Cover and seal the remaining drain hole using the remaining outdoor drain gasket, cover plate and remaining sheet metal screws provided. Periodically inspect drain passages for blockage. Blow out drain tubing annually to prevent overflow from entering the building.

NOTE

The external drain kit is intended to be installed in conjunction with a fieldsupplied condensate drain system. Installing the kit without connecting it to an external drainage system may result in inadequate condensate removal, leakage and/or corrosion.





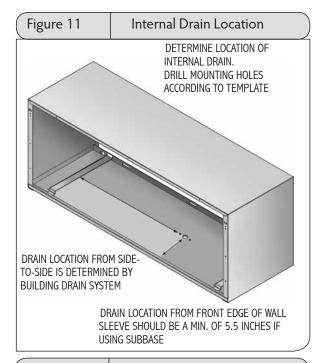
CONDENSATE DRAIN KIT (cont.)

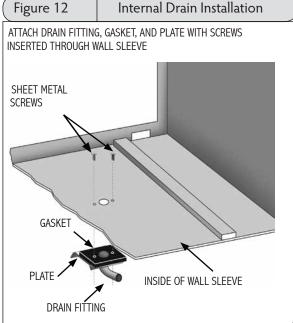
Internal Drain INSTALLATION

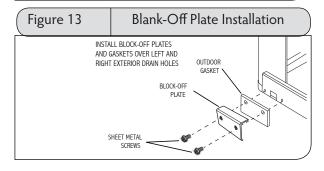
The drain kit can be installed as an internal drain on the bottom of the wall sleeve to allow condensation to drain into an internal drain system inside of the building. Locate the drain so that it will be on the room side of the wall when the cabinet wall sleeve is installed.

NOTE: The drain kit must be installed prior to the installation of the wall sleeve.

- 1. Locate an area on the wall sleeve that will be inside the room when the sleeve is installed. If a subbase is installed, locate the kit a minimum of 5 1/2" from the front flange of the wall sleeve. This clearance will provide adequate clearance for the subbase.
- Cut out the template shown to the right. Using this template, locate and drill the drain kit holes as close to the outside wall as possible.
- Using Figure 12 as a guide, assemble the drain gasket, drain fitting plate, and indoor drain fitting together. Install the assembly into the drilled holes and secure using the two indoor mounting screws provided. The screws must be inserted INSIDE the wall sleeve and TOP driven down into the drain fitting plate.
- 4. Ensure drain tube is not restricted. Cover the two screw heads with a good quality outdoor caulking (not supplied) for additional corrosion protection.
 - NOTE: If the drain fitting is not connected to an indoor drainage system immediately after the wall sleeve is installed; plug the hole with cork (not included) to prevent indoor water damage in case it rains.
- 5. Install a ½" ID tube or hose (not included) on the drain fitting and interconnect it to the drain system inside of the building. Ensure that there are no kinks or traps in tube or hose. Kinks or traps can cause improper drainage.
- Install the two drain blank-off plates and outdoor drain gaskets on the outdoor portion of the wall sleeve as shown in Figure 13. These components can be installed after the sleeve is secured in the wall opening just prior to the installation of the condenser grille and chassis.







REAR GRILLE INSTALLATION INSTRUCTIONS

STAMPED REAR GRILLE

Part Number 6070264

The rear grille directs condenser airflow and provides a protective barrier for the outdoor coil. Either the approved Standard or Architectural grille must be installed before installing the chassis.

Attach the outdoor louver from the inside by maneuvering the louver through upright supports in the sleeve. Use the four #8-32 nuts and bolts to fasten the louver to the left and right sides of the wall sleeve.

Standard louvered grille Installation

- 1. Prepare the grille for installation by installing the five plastic fasteners supplied through the holes in the
- Guide the alignment pins, located on the lower-right and lower-left hand corners of the grille, with their corresponding holes on the rear outside edge of the wall sleeve.

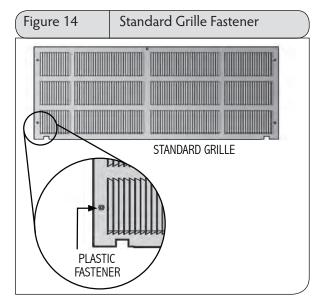
If installing the grille from inside the room:

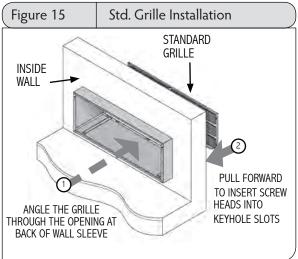
Use the attached plastic handle to keep a firm grasp on the grille. Angle the grille through the opening at the rear of the wall sleeve, then pull the grille back to the wall sleeve and align the screw heads to the hole. Be sure to keep a firm grip on the plastic handle and grille to prevent it from dropping and/or causing possible injury or property damage. Remove the plastic handle when installation is complete.

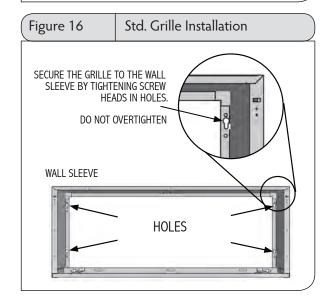
Secure the grille to the wall sleeve by installing screws into the plastic fasteners. Be careful not to damage fasteners by overtightening.

CAUTION

Before installing louvers above the first floor, be sure to secure louver with a safety line (rope) to ensure louver does not fall.







REAR GRILLE INSTALLATION INSTRUCTIONS (cont.)

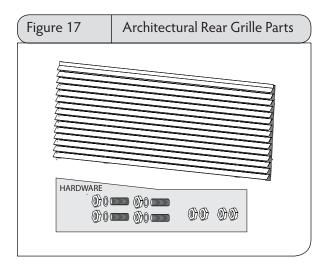
ARCHITECTURAL REAR GRILLE

Part Number 6070422

The rear grille directs condenser airflow and provides a protective barrier for the outdoor coil. Either the approved Standard or Architectural grille must be installed before installing the chassis.

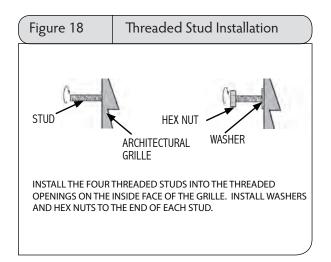
Architectural louvered grille kit installation

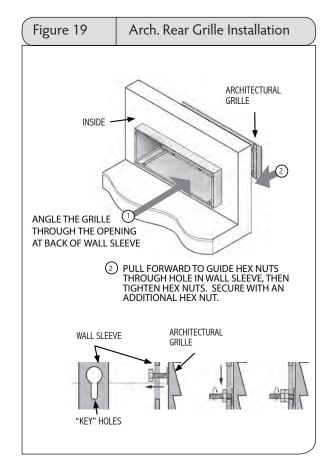
- Install the four threaded studs into the threaded openings on the inside face of the grille. Install a washer and one hex nut to the end of each stud.
- Manipulate the grille out through the rear wall sleeve opening. Be sure to keep a firm grip on the grille to prevent it from dropping and/or causing possible injury or property
- 3. Attach the grille to the sleeve by aligning and inserting the hex nut threaded onto the studs through the holes in the
- Secure the grille to the sleeve by tightening the hex nut and adding and tightening an additional hex nut.



CAUTION

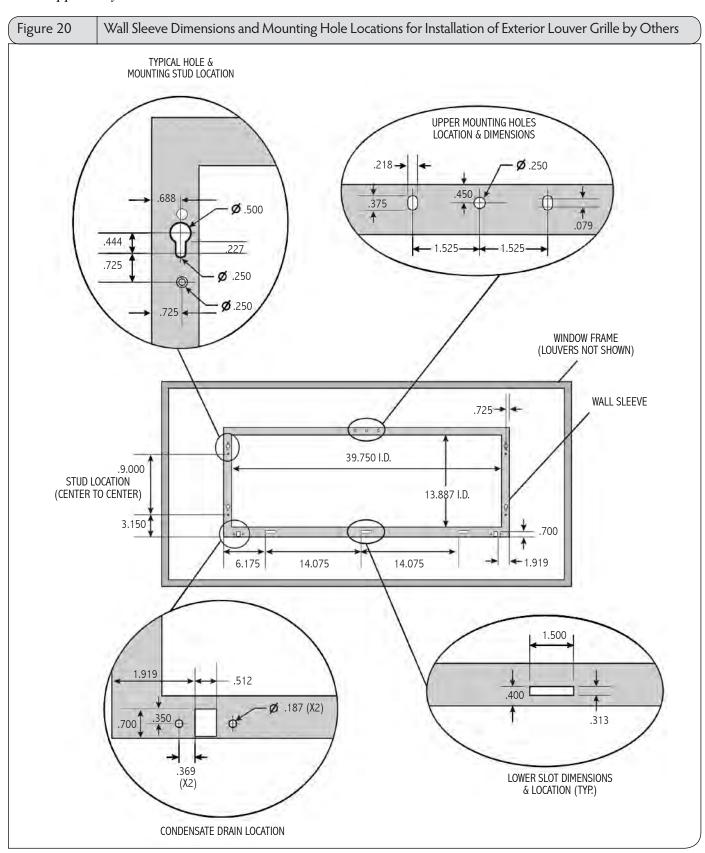
Before installing louvers above the first floor, be sure to secure louver with a safety line (rope) to ensure louver does not fall.





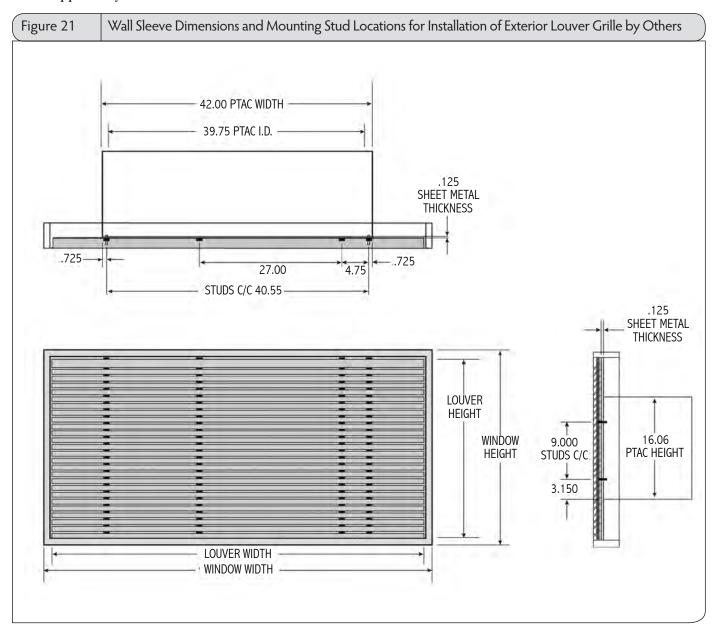
REAR GRILLE INSTALLATION INSTRUCTIONS (cont.)

Part Supplied By Others



REAR GRILLE INSTALLATION INSTRUCTIONS (cont.)

Part Supplied By Others



SUBBASE ASSEMBLY & INSTALLATION

SUBBASE ASSEMBLY & INSTALLATION

Electrical Subbase Assembly

An electrical Subbase provides a convenient location for unit wiring to be connected to building wiring. It also provides support for the indoor portion of the unit.

Subbase Selection

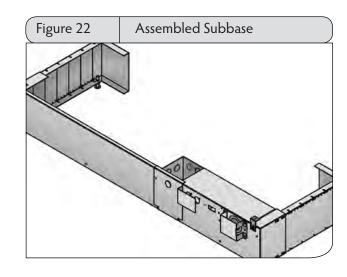
Select a subbase according to the power requirements of the unit. See Subbase Selection chart on page 28.

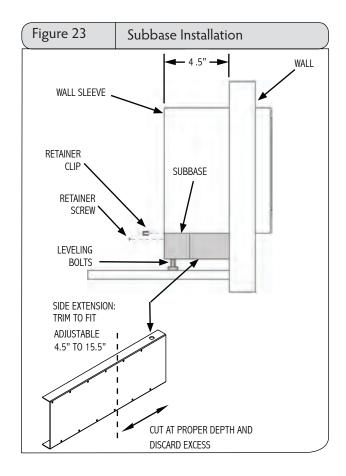
Subbase Electrical Connection

The wiring should be roughed in and the conduit connected to the subbase junction box. Complete the installation by wiring the receptacle to the incoming power supply.

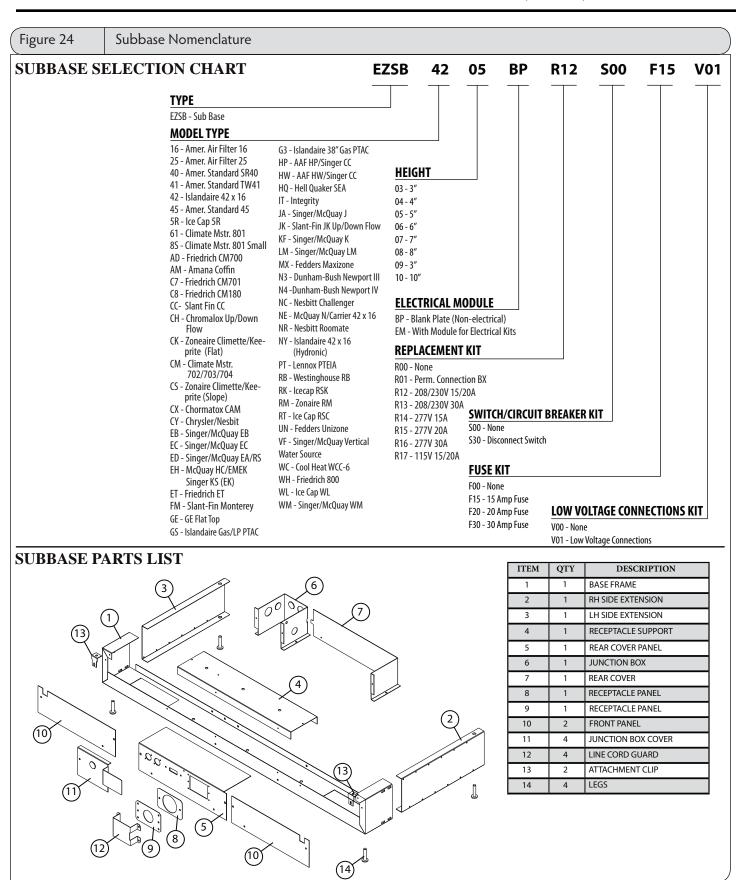
Subbase Installation Notes:

- 1. Insert the side extension pieces into the front assembly and determine the required assembly depth by placing the assembly under the wall sleeve.
- Determine the depth of the side extension pieces desired and cut at the proper depth. Subbase may be installed without the side extension pieces.
- Insert leveling bolts into the subbase bottom flange. Four (4) bolts are required if the side extensions are used.
- 4. Place the subbase on the floor and align its center line with the center line of the wall opening.
- Secure the subbase to the wall sleeve with the two retainer clips provided.





SUBBASE ASSEMBLY & INSTALLATION (cont.)



CHASSIS INSTALLATION

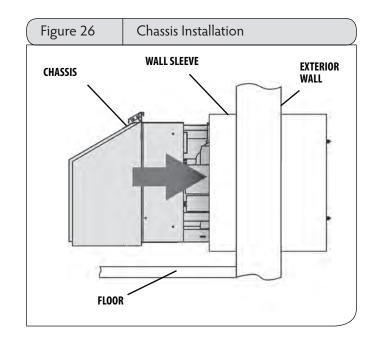
Installation instructions:

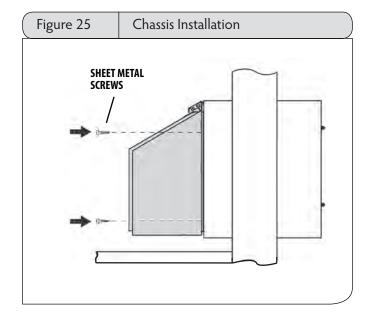
- Slide the Islandaire Series "GS" air conditioner into the wall sleeve.
- Verify proper sealing between the air conditioner and wall sleeve, also between the air conditioner and the outdoor louver.
- Lock the unit into the wall sleeve using the #8 sheet metal screws supplied. Two screws are attached on each side of the chassis to ensure a proper seal between the chassis and the wall sleeve.

For installation of retrofit replacement PTAC units:

This unit will fit most existing 42" x 16" type wall sleeves. Inspect the existing wall sleeve and outdoor louver to ensure satisfactory condition prior to unit installation. Louver design must be approved by the Islandaire Engineering Department.

Consult Islandaire for accessory kit information, which may be required for some retrofit installations.





GAS CONNECTIONS

Connect gas supply line to the gas valve located in the lower right front of the unit. A manual valve must be installer-supplied either inside or just outside of the wall sleeve as appropriate per local codes and/or ANSI-Z223.1 or CAN/CGA-B149.

An 18 to 24 inch listed gas hose/flexible connector with ½ SAE female flare must be installer-supplied for connection to the appliance.

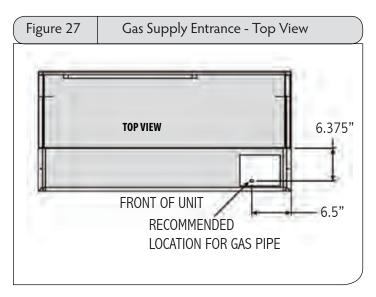
Pressure test and purge gas piping according to the requirements of local gas codes and/or ANSI-Z223.1 or CAN/CGA-B149. The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures above ½ PSIG (3.5 kPa).

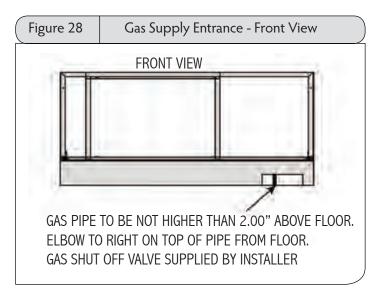
Additionally, the appliance must be isolated from the gas supply piping system by closing the appliance manual valve during any pressure testing as described above.

GAS PIPE

Capacity of pipe of different diameters and lengths in cubic feet per hour with pressure drop of 0.3 inches and specific gravity of 0.60 inches.

LENGTH OF PIPE	IRON PIPE SIZES (IPS) IN INCHES								
(IN FEET)	1/2	3/4	1	1 1/4	1 1/2				
10	132	278	520	1,050	1,600				
20	92	190	350	730	1,100				
30	73	152	285	590	890				
40	63	130	245	500	760				
50	56	115	215	440	670				
60	50	105	195	400	610				
70	46	96	180	370	560				
80	43	90	170	350	530				
90	40	84	160	320	490				
100	38	79	150	305	460				
125	34	72	130	275	410				
150	31	64	120	250	380				
175	28	59	110	225	350				
200	26	55	100	210	320				





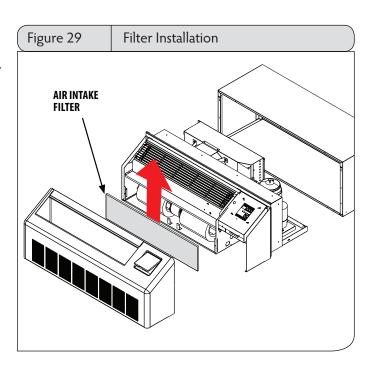
Gas Supply Pressure

	MINIMUM	MAXIMUM
NATURAL GAS	5.5" W.C.	13.5" W.C.
PROPANE GAS	11" W.C.	13" W.C.

FRONT COVER INSTALLATION

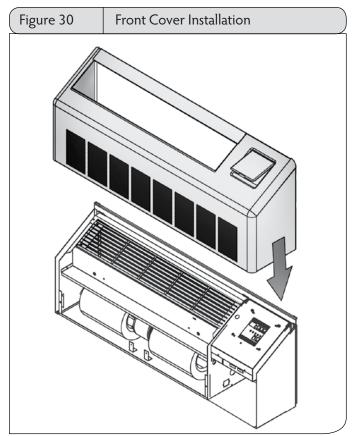
INSTALL AIR FILTER

Install air filter. Failure to do so could void the warranty. Insert filter into the return air compartment.



FRONT COVER INSTALLATION

Attach the front cover by sliding it down over mounting brackets located on the top and lower right and left sides of the cooling chassis.



ELECTRICAL INSTALLATION

LCDI CORD

Plug the integral supply cord (if provided) into an appropriate receptacle or directly wire the appliance to the appropriate electrical supply. Verify proper wiring of receptacle prior to attaching supply cord. Incorrect wiring may impede operation of unit.

Do not cut or remove the grounding prong from the plug. When this appliance is installed, it must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/ NFPA 70 and/or the CSA C22.1 Electrical Code.

HARDWIRE KIT

Cord connection to a wall socket is not permitted for 265 volt units. All 265 volt units must be hard-wired using the Hardwire kit or make use of the plug-in receptacle in the standard subbase.

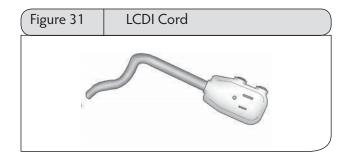
LCDI CORDS

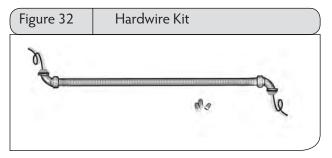
115V and 230/208V units are equipped with LCDI power cords and can open the electrical circuit to the unit. In the event the unit does not operate, check the reset button located on or near the head of the power cord as part of the normal troubleshooting procedure.

VOLTAGE MEASUREMENTS

Once the unit is properly wired, measure the unit supply voltage. Voltage must fall within the voltage utilization range as shown in the table below.

OPERATING VOLTAGE						
UNIT VOLTAGE	VOLTAGE UTILIZATION RANGE					
RATING	MINIMUM	MAXIMUM				
115	103	132				
230/208	197	253				
265	238	292				





Fresh Air Vent and Lateral Duct Kit

FRESH AIR VENT

The optional fresh air vent control allows outside air to be drawn into the conditioned area at 72 CFM during fan operation. This outside air can provide ventilation when the blower is operating, but it will increase the heating or cooling load and operating costs. The vent operation is fully automatic and closes when no fan is running.

LATERAL DUCT KIT

The Lateral Duct kit allows the air from one PTAC unit to be shared by an adjacent room. The kit mounts to the top of the unit and can be configured for either right or left discharge. The amount of air diverted to the second room is adjustable in the following configurations:

50:50 split, room 1:room 2 60:40 split, room 1:room 2

70:30 split, room 1:room 2

The kit consists of a main duct for the room of origin and an extension duct to reach the adjoining room and a terminal discharge grille.

Part No. 4080704 - Main Duct with Plenum

Part No. 4080991 - Duct Extension 10 1/2"

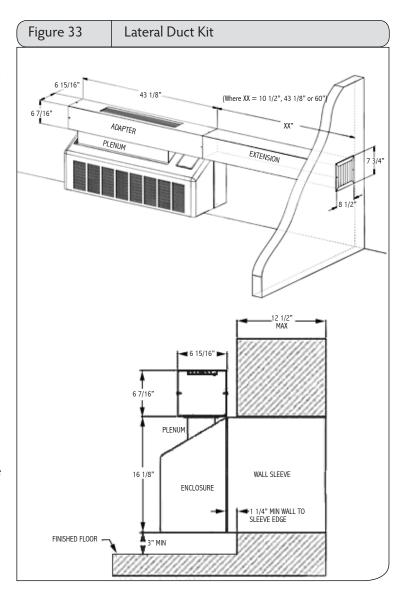
Part No. 4080707 - Duct Extension 43 1/8", includes Grille

Part No. 4080709 - Duct Extension 43 1/8" Part No. 4080780 - Duct Extension 60'

Part No. 6070199 - Discharge Grille

NOTE: Modification to the factory supplied duct kit other than outlined herein will void the warranty. Total overall length of duct kit not to exceed 10 feet.

Part Number 4080704 Duct Kit Assembly includes Plenum, Main Duct Assembly with End Cap, and associated hardware. The Duct Extension and Discharge Grille must be ordered separately.



NOTE: Recommended for use on models with remote thermostat. Not recommended for models with built-in thermostat.

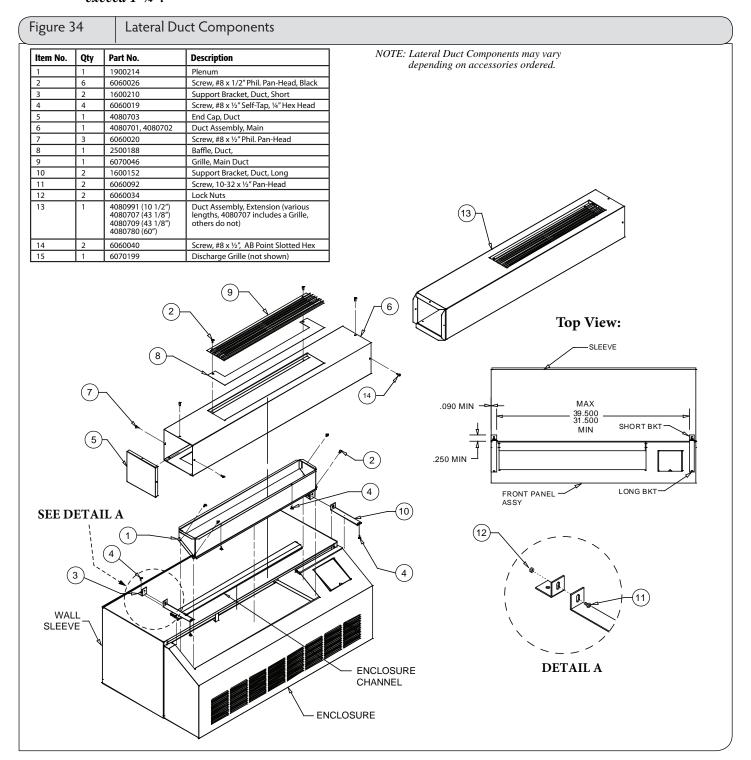
FRESH AIR VENT AND LATERAL DUCT KIT (cont.)

INSTALLING (OPTIONAL) LATERAL DUCT

Refer to Figure 34 and proceed as follows:

Note: Projection of Wall Sleeve into room must not exceed 1-1/4".

- Remove the Enclosure.
- Remove Enclosure Channel from the Enclosure.
- 3. Pull the EZGS Chassis out from the Wall Sleeve.
- Remove the Grille from the Enclosure.



FRESH AIR VENT AND LATERAL DUCT KIT (cont.)

- Attach Plenum (item 1) to the Unit Discharge opening where Grille was located using four (4) #8 x ½" black pan-head screws (item 2).
- Install two (2) Short Duct Support Brackets (item 3) on the Wall Sleeve as shown in Figure 34 using one (1) #8 x ½" self-tapping hex-head screw (item 4) in each bracket.
- If necessary, Duct End Cap (item 5) can be removed and re-located to the opposite end of the Main Duct Assembly (item 6), depending on the desired air discharge direction (left or right).
- The Duct Baffle (item 8) is factory positioned to provide a 50/50 distribution of air into each zone. Cutting it along the scored line results in 60/40 air distribution (60% in PTAC room, 40% in adjacent room). Removing the Baffle completely results in a 70/30 split. Install Duct Baffle and Main Duct Grille (item 9) in Main Duct Assembly using two (2) #8 x 1/2" black panhead screws (item 2).

- Attach the Long Duct Brackets (item 10) to the Short Duct Brackets (item 3) using two (2) 10-32 x ½" panhead screws (item 11) and two (2) lock nuts (item 12) as shown in Figure 34.
- 10. Carefully slide the unit Chassis back into the Wall Sleeve ensuring the Plenum inserts properly into the track on the underside of the Main Duct Assembly.
- 11. Mount the Enclosure without Enclosure Channel.
- 12. Attach the Extension Duct Assembly (item 13) to the Main Duct Assembly using two (2) #8 x 1/2" slotted hex-head screws (item 14).
- 13. If ordered, install Discharge Grille (item 15) in wall over Extension Duct Assembly opening using suitable hardware. Air Intake Filters

MAINTENANCE

Part Number 6080066

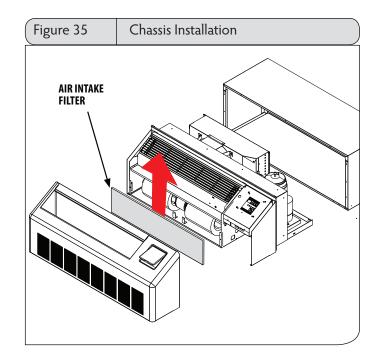
When air conditioner is operating, indoor air is filtered and refiltered continuously trapping airborne dirt and dust in the washable filter. The air intake filters are removable for easy cleaning. A clean filter helps remove dust, lint, and other particles from the air and is important for best cooling and operating efficiency.

Check the filter every two weeks to see whether it needs cleaning.

- 1. Turn unit off.
- Remove front cover.
- Remove air filter by grasping the edge of the filter frame and pulling out of the unit.
- Wash in hot soapy water, rinse and shake dry.
- Replace the filter.
- To dry the filter thoroughly, run your unit for a few minutes in fan mode.

ROUTINE MAINTENANCE

- Keep air intake filter clean.
- Coils should be inspected periodically for build up of lint, dirt, leaves, other debris, and bent fins.
- Clean coils with a soft brush and compressed air or vacuum. Do NOT use sharp objects to clean coils.
- The fan motors are permanently lubricated and do not require re-oiling.
- In areas of heavy snow and ice accumulation, snow and ice should not be permitted to accumulate against the unit. As soon as practical after such inclement weather, clean snow and ice from around the unit as much as possible from the filters of the
- If unit is installed over the winter, be sure that the fan turns freely before turning it on.



LIGHTING, OPERATING & SHUT DOWN

Safety Information

- This appliance does not have a pilot. It is equipped with an ignition device, which automatically lights the burner. Do not try to light the burner by hand.
- BEFORE OPERATING smell all around the appliance area for gas. If your unit uses LP (propane), be sure to smell next to the floor because LP (propane) gas is heavier than air and will settle on the floor.
- Use only your hand to turn the gas valve knob. Never use tools. If the knob will not turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in fire or explosion.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system and any gas valve, which has been under water.
- Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person.

Lighting, Operating And Shut Down Instructions

This appliance requires combustion air for heating operation. Air is drawn from the outdoors through the rear grill assembly.

Do not block or obstruct air openings in the rear

This appliance will automatically light itself in response to a thermostat call for heat. To initiate heating operation, turn on the manual valve in the gas supply piping and the manual valve located in the front right compartment of the appliance.

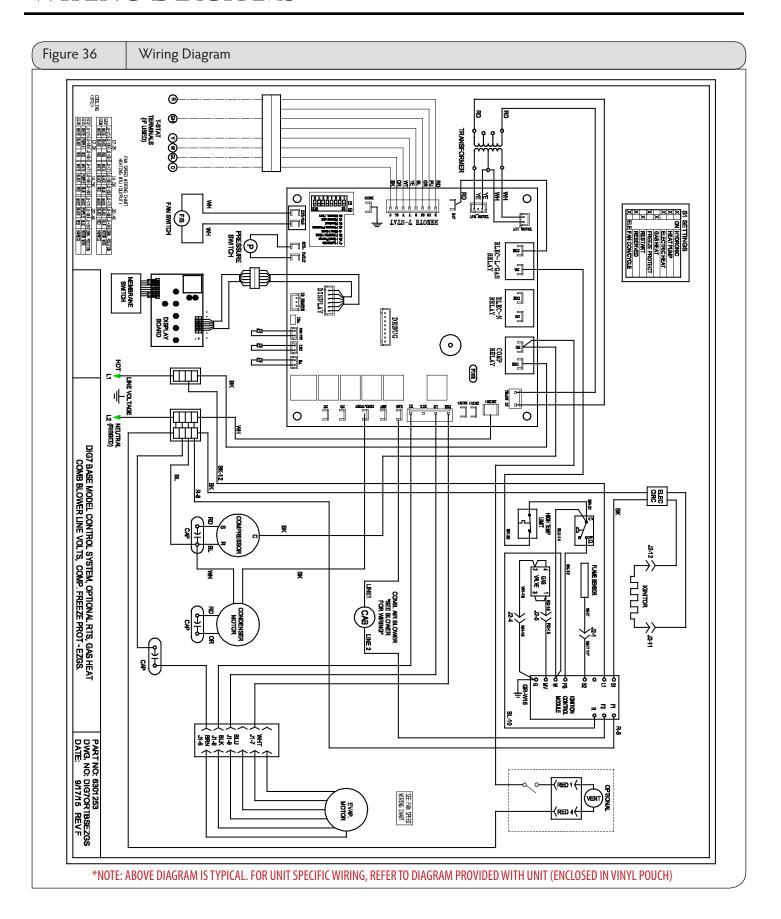
This procedure should be used on initial start up of thruwall air conditioning units. On new installations and on units that may have been idle for a period of time, this procedure should take approximately ten minutes per unit to test adequately.

Shut Down

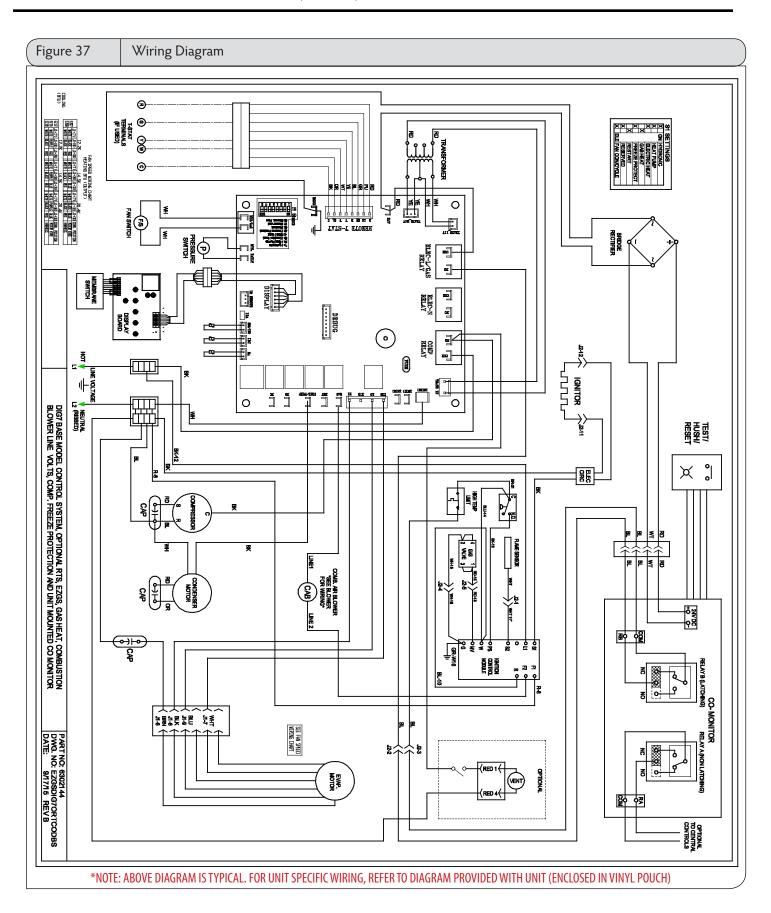
For extended shut down, turn off the manual valve in the gas supply piping and the manual valve located in the front right compartment of the appliance. Push the OFF button on the selection console and unplug power cord or turn off circuit breaker powering unit.

Note: On electronic units if power is not disconnected, the unit may activate indoor low temperature mode which will allow the appliance to maintain 55 degrees in the room space whether or not it is in the "OFF" position.

WIRING DIAGRAMS



WIRING DIAGRAMS (cont.)



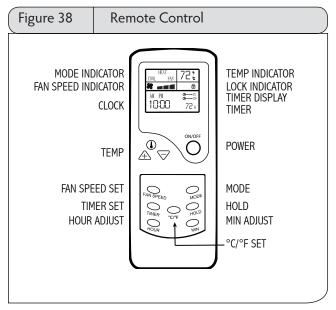
SYSTEM CONTROLS AND MANAGEMENT

USER INTERFACES

The Islandaire EZGS PTAC can be operated by several different control systems. Listed on this page are some of the important control features and a brief description of their functions.

REMOTE CONTROL

The unit can be conveniently operated with a battery operated wireless remote control. All functions are accessible through the remote control unit.



General Operation

Press the On/Off button on the remote control.

Press the MODE button to select the desired operation mode: Cool/Fan/Heat. Press the TEMP + or TEMP buttons to set desired temperature. Press the Fan Speed button to set the desired air flow rate (high/med/low).

Setting the Clock

When new batteries are inserted, the default clock setting is 00:00 A.M. To adjust the setting to the current time, open the back cover and push the CLK button; the clock display will blink. Use the HOUR and MIN buttons to set the current time.

Then press the CLK button again and close the back cover.

DIGITAL CONTROL PANEL

The built-in digital control panel features an easy to read digital display, large buttons and bright indicator lights. Energy management and temperature limiting preferences allow the owner to increase efficiency, limit extreme usage and optimize performance.

See page 42 for full details

MECHANICAL CONTROL Panel

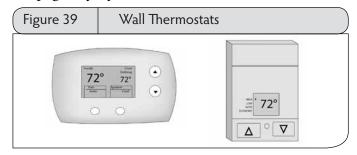
Provides a familiar interface with solid state push buttons and a temperature control knob.

See page 43 for full details

WALL THERMOSTATS

Terminal connections on the main control board allow easy conversion from an on-board control panel to a wall mounted thermostat control (wired or wireless).

See page 45 for full details.



FRONT DESK CONTROL

Low voltage terminals on the main control board allow easy connection to a front desk energy management system. Front desk controls allow the unit to be operated from a remote location. Front desk controls can reduce energy consumption by allowing front desk personnel to turn the unit off when a room is vacant.

SYSTEM MANAGEMENT SOFTWARE

The Islandaire EZGS PTAC is equipped with an on-board control system that contains system management software and sensors. Built-in safety features protect the unit from the damaging effects of freezing temperatures and power interruptions. Energy management features allow unit performance to be customized and control power consumption. System monitoring software helps service personnel quickly correct any problems.

Listed below are some of the important control features and a brief description of their functions.

See Performance Specifications section starting on page 50 for full details of all functions.

FAN CYCLE CONTROL

The indoor fan cycle control allows the unit to operate more efficiently. This feature conserves energy by operating the fan only while the compressor or heater is operating. Constant fan operation in High, Low, or Auto settings is also available.

ROOM FREEZE PREVENTION

The indoor freeze protection monitoring system prevents unoccupied rooms from reaching freezing levels that can damage plumbing and fixtures. This feature is automatic regardless of mode and does not require any additional settings. This feature can be turned on or off by adjusting DIP switch settings on the control board.

HIGH TEMPERATURE COMPRESSOR PROTECTION

The life of the compressor is extended through a built in temperature protection. The system will initiate a compressor lockout if the compressor temperature exceeds 154 °F or if the outdoor air temperature falls below 35 °F.

Compressor Short Cycle Protection:

Built-in three minute timing delay: If cycle is interrupted, the compressor will not restart for three minutes.

Initial power up on remote thermostat units will have a one time, three minute delay before the compressor will start. Units using built in controls will power up immediately.

LOW TEMPERATURE COMPRESSOR PROTECTION

An indoor frost sensor will disable the operation of the compressor if freezing conditions exist. This protects the compressor from damage due to airflow reduction or low outdoor air temperature. When the coil temperature rises to a safe temperature the compressor resumes normal operation.

DIAGNOSTIC SOFTWARE

The system management software performs self-diagnostic tests that can alert service personnel to potential problems. Error codes are stored and displayed on the digital display and can save service call time during troubleshooting and maintenance.

See page 49 for a list of Error Codes

CUSTOM OPERATION AND CONTINUAL ROOM Temperature Monitoring

The system controls utilize a built-in temperature sensor for measuring room temperature. When a pre-determined (user-defined) temperature set point is reached, the on-board controls automatically adjust unit operation to match.

See page 48 for Temperature Limiting details.

Auto Restart Feature:

To prevent multiple units from powering up simultaneously after a power outage, there will be a random 5 to 15-second delay before the unit turns on after power has been restored.

DIGITAL CONTROL PANEL

Turning Unit ON for Heating and Cooling:

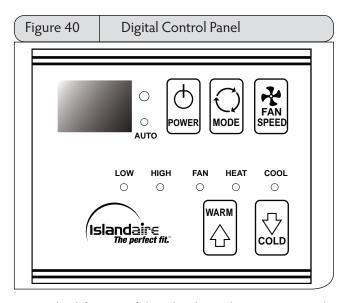
- 1. Press ON/OFF key (room temperature will appear in display).
- On initial startup press F/C key to select temperature scale (Celsius or Fahrenheit).
- Select mode by pressing HEAT or COOL key.
- Adjust set point by pressing WARM (up arrow) or COLD (down arrow) key (while adjusting, temperature set point will appear in display).
- Select fan mode by pressing FAN key. Select constant fan operation (LOW or HIGH speed) or AUTO. In AUTO, the fan will cycle and select fan speeds based on heating or cooling demand.

Turning Unit OFF:

- Press ON/OFF key (temperature display disappears).
- To turn fan off press FAN key until fan AUTO LED indicator is lit.

Fan Only Operation:

- Turn off unit by pressing ON/OFF key (temperature display disappears).
- Select fan mode by pressing FAN key. Select constant operation (LOW or HIGH speed).
- Selecting AUTO will turn fan off.

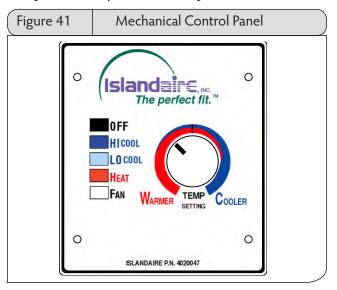


A standard feature of the Islandaire electronic control system is the 'Low Temperature Protection' option. If an indoor temperature of 55 °F (or lower) is detected, the heat cycle will automatically activate (even if the unit is in the OFF position). While the 'Low Temperature Protection' feature is activated, the letters 'LO' will be displayed. The heat cycle will continue until the room temperature reaches 60 °F, at which time the unit will satisfy and shut down. All control functions will be locked-out while 'LO' is displayed.

Note: Disconnecting the power supply to the unit is the only way to interrupt unit function while the 'Low Temperature Protection' feature is activated. If desired, this feature may be disabled by your qualified service provider.

MECHANICAL CONTROL Panel

Use the control panel to power on/off, select mode, select fan speed, and adjust the set temperature.



FAN MODE

Press the FAN button on the selector switch and allow motor to reach maximum R.P.M. in the warm months. If unit is in a warm area, this should be approximately 15 to 30 seconds. During cold months or in cold areas, this could take up to nine seconds or more. This allows time to warm up on HI speed.

COOLING MODE

Press HI COOL button, rotate thermostat counterclockwise until it stops. The indoor fan motor will run.

WARNING: IF OUTSIDE TEMPERATURE IS BELOW 55 °F, DO NOT START THE COMPRESSOR AT THIS TIME. WAIT UNTIL WARMER WEATHER TO OPERATE COOLING.

If the outside temperature is above 55 °F, rotate the knob clockwise. The compressor and condenser fan motor will start. Cool air should be felt at the discharge openings in a short period of time (approximately six to nine seconds).

Firmly press LO COOL button. The indoor motor should reduce speed without affecting compressor or condenser motor speed.

HEAT MODE

Push the HEAT button on the selection console and establish the desired temperature setting on the thermostat.

Heater Safety Feature:

When the heater is powered off, the fan will automatically stay on and run for 60 seconds to ensure the removal of residual heat.

REMOTE WALL MOUNTED THERMOSTATS

REMOTE THERMOSTAT CONTROL

The EZGS can be controlled by any remote electronic thermostat that can interface with RCBWYG terminals. The Control Selection jumper must be in T'STAT position. During a call, the remote thermostat will pass R back to the controller on a respective terminal. The push buttons on the touchpad become inactive in the remote thermostat mode; error codes will display as normal on the touchpad display.

Note: In terms of outputs, there are two types of thermostats; Relay Contacts and Solid State.

Manufacturers of solid state output thermostats include loading resistors in their installation kits. These 560 Ohm, 3W resistors are meant to load thermostat solid state outputs in order for the output voltage to be either 0 or 24 Vac (i.e., no floating voltage). These resistors are connected from W, Y, G to common (C), respectively.

You can wire any type of 24 Vac thermostat straight into the Remote Thermostat Interface on the PTAC control board (see page 45).

WIRELESS WALL THERMOSTAT

Wireless wall thermostats are designed to provide precise temperature control without the installation labor and expense of wiring.

- Powered by AA batteries.
- Mounts in any suitable location that will provide an accurate room temperature reading.
- Large LCD display provides the user with current room temperature, set point temperature, time, program interval, and other system status information.

Remote Control Node

Used with a wireless wall thermostat, the RCN communicates with the thermostat using unlicensed 9.00 MHz, radio frequency energy.

ENERGY SAVING OPTIONS

Automatic Change-Over Remote Mounted Thermostats can be obtained to switch from heating to cooling and from cooling to heating automatically. With automatic change over, the operation of the heating cycle or the cooling cycle is determined by the temperature requirement of the space.

Most thermostats with this feature are set to change over when the room temperature varies 3-1/2 °F from the set point. The unit is placed in the cooling mode when the set point is over 3-1/2 °F; 3-1/2 °F under the set point places the unit in the heating mode. This 3-1/2 °F variation is usually adjustable from a 1/2 °F dead band to a 5 °F dead band. Each cycle is run until the set point temperature is reached, then that cycle is de-energized. On some thermostats, the automatic changeover function can be overridden manually by moving the thermostat selector switch to "HEAT" or to "COOL."

The fan operation, with an automatic change over thermostat, is controlled by the fan selector switch. When placed in the "FAN" mode, the fan runs continuously. When placed in the "AUTO" mode, the fan will only energize when the thermostat calls for heating or cooling.

REMOTE THERMOSTAT INTERFACE

The remote thermostat interface terminal block is located on the main circuit board. A wiring harness is provided with conductors for all applications (Heat Cool, Heat Pump, Multispeed Fan, etc.). It provides a connection for remote thermostat and energy management inputs. To convert to thermostat operation:

- 1. In standby off mode, press MODE and WARM (+) buttons simultaneously for 3 seconds. The buzzer will chime and LED display reads " ?" or " ?".
 - **?** : unit control panel has control of unit.
 - : wall thermostat has control of unit.
- 2. Make sure " " " is selected. If not, toggle setting by pressing and holding the MODE and WARM (+) buttons simultaneously for 3 seconds.
- Plug in the supplied thermostat harness.
- Connect wires to field-supplied thermostat.

Terminal R (Red)

Low voltage terminal to supply voltage to an external wall-mounted thermostat. This terminal is capable of supplying 100 mA at 18-30 Vac RMS over the entire input voltage range specified.

Terminal LS (Purple)

When this low voltage terminal is connected to the R terminal, the compressor and electric heater are disabled to provide an energy management system interface.

Terminal GH (Green)

When this low voltage terminal is connected to the R terminal, and the unit is in remote mode, the blower/fan will be requested for operation on high speed.

Terminal B (Blue)

When this low voltage terminal is connected to the R terminal, and the unit is in the remote mode, the reversing valve is energized. Hydronic and electric heat shall be attempted as backups if the B terminal is asserted and the compressor is locked out or disabled. This is subject to the configured heat modes available.

Terminal Y (Yellow)

When this low voltage terminal is connected to the R terminal, and the unit is in remote mode, the compressor will be switched on (the GL or GH terminal must also be connected to the R terminal).

Terminal W (White)

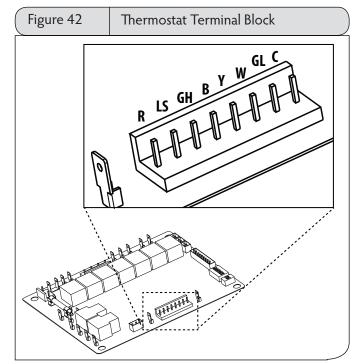
When this low voltage terminal is connected to the R terminal, and the unit is in the remote mode, first hydronic heat is attempted, and electric heat is switched on as backup (the GL or GH terminal must also be connected to the R terminal). This is subject to the configured heat modes available.

Terminal GL (Orange)

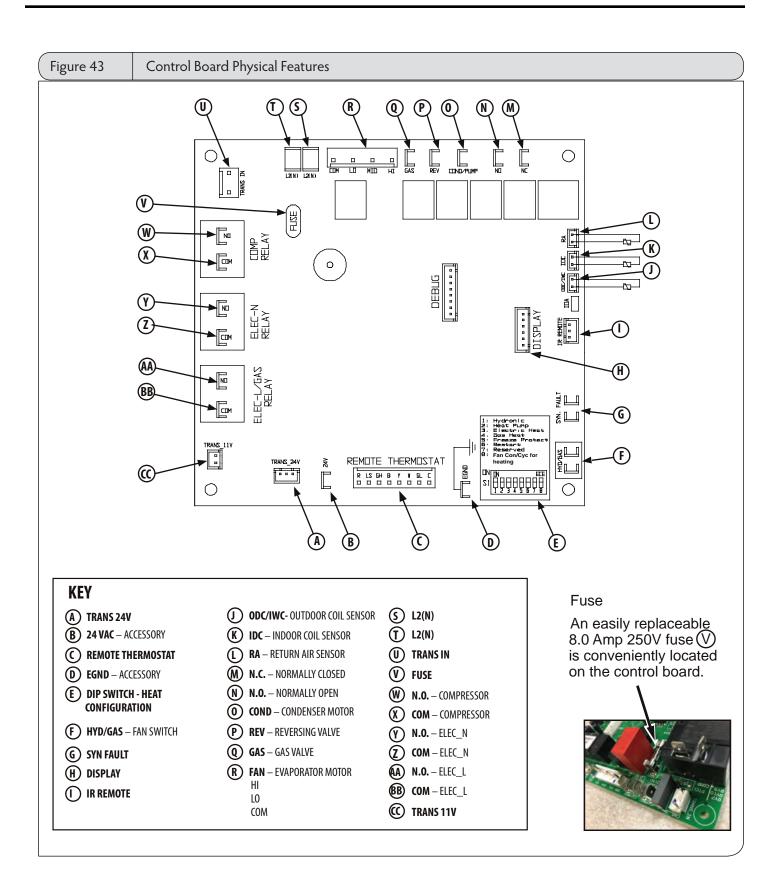
When this low voltage terminal is connected to the R terminal, and the unit is in remote mode, the blower/ fan will be requested for operation on low speed.

Terminal C (Black)

Low voltage terminal, 24 Vac common, to provide opposite polarity voltage to wall thermostat.

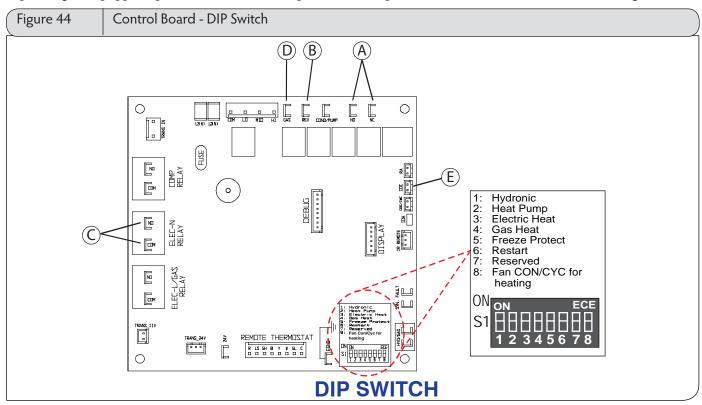


CONTROL BOARD



DIP SWITCH SETTINGS

A DIP switch is located on the Main Control Board, as shown in the diagram below. Settings are unit-specific, depending on equipped options. The table below provides descriptive information about each switch setting.



DIP SWITCH	DESCRIPTION	FUNCTION	INPUT/OUTPUT
SW1	HYDRONIC	ON = ENABLES OPERATION OF N/O AND N/C TERMINALS (see A above) OFF = DISABLES OPERATION OF N/O AND N/C TERMINALS (see A above)	LINE VOLTAGE/24V
SW2	HEAT PUMP	ON = ENABLES POWER TO L2 (N) AND REV TERMINALS (see B above) OFF = DISABLES POWER TO L2 (N) AND REV TERMINALS (see B above)	LINE VOLTAGE
SW3	ELECTRIC HEAT	ON = ENABLES POWER TO ELEC-N RELAY TERMINALS (see C above) OFF = DISABLES POWER TO ELEC-N RELAY TERMINALS (see C above)	LINE VOLTAGE
SW4	GAS HEAT	ON = ENABLES POWER TO GAS TERMINAL (see D above) OFF = DISABLES POWER TO GAS TERMINAL (see D above)	24 VAC
SW5	FREEZE PROTECT	ON = ENABLES IDC TEMP MONITORING FOR MIN. TEMP (see E above) OFF = DISABLES IDC TEMP MONITORING FOR MIN. TEMP (see E above)	IDC SENSOR
SW6	RESTART	ON = ENABLES POWER FAILURE MEMORY SAVE FUNCTION OFF = DISABLES POWER FAILURE MEMORY SAVE FUNCTION	N/A
SW7	RESERVED	Not Used	Not Used
SW8	FAN CON/CYCLE	ON = ENABLES CONTINUOUS FAN OPERATION OFF = DISABLES CONTINUOUS FAN OPERATION	N/A

TEMPERATURE LIMITING

SET TEMPERATURE LIMITING

How to Set the Heating and Cooling Limits

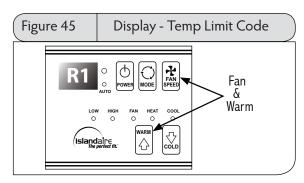
Setting customized temperature set point ranges can save energy costs by limiting extreme settings.

To enter the set point setup mode, hold down the FAN + WARM buttons for 5 seconds.

While the unit is in this mode, you can now scroll through a series of codes (R1, R2, R3, R4, etc.) to select the desired temperature limiting setting. To move from one code to the next, press the FAN + WARM buttons together to move to the next code on the digital display. See chart at right for the codes and the set point range they each represent.

To accept the new set point, release the buttons for 10 seconds when the desired code is displayed. The change will take effect when the ON/OFF key is pressed a second time, returning the display to normal function.

To cancel the change, wait 10 seconds without pressing the ON/OFF button a second time.



Available Set Point Ranges

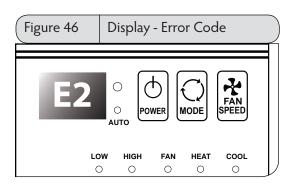
DISPLAY CODE	LOW LIMIT (DEGREES F)	HIGH LIMIT (DEGREES F)			
R1	63	86			
R2	65	86			
R3	65	90			
R4	67	88			
R5	67	92			
R6	69	90			
R7	68	72			
R8 (FACTORY DEFAULT)	60	90			

ERROR CODES

DIAGNOSTIC & ERROR CODES

Control Panel Display Diagnostics

Sensors in the unit continually monitor the indoor coil, outdoor coil, and outdoor air conditions. If abnormal conditions are detected, an error code is displayed removing the guess work in troubleshooting a unit.



ERROR CODE	DIAGNOSIS	CAUSE	NOTE
E2	RETURN AIR (RA) TEMPERATURE SENSOR FAILURE	RA SENSOR BROKEN OR LOOSE AT BOARD CONNECTION	UNIT OPERATION DISABLED
E3	INDOOR COIL (IDC) TEMPERATURE SENSOR FAILURE	IDC SENSOR LOOSE OR BROKEN AT BOARD CONNECTION	UNIT OPERATION DISABLED
E5	OUTDOOR COIL (ODC) TEMPERATURE SENSOR FAILURE	ODC SENSOR BROKEN OR LOOSE AT BOARD CONNECTION	UNIT OPERATION DISABLED
E8	OVERHEAT / FREEZE PROTECTION	REFRIGERANT RESTRICTION DIRTY FILTER / EVAPORATOR COIL FAILED EVAPORATOR MOTOR RETURN SUPPLY AIR RESTRICTED	UNIT OPERATION DISABLED
E 9	SYN. FAULT TERMINALS OPEN	HIGH PRESSURE SWITCH OPEN: • DIRTY CONDENSER COIL (COOLING) • FAILED CONDENSER MOTOR (COOLING) • ENSURE BAFFLES ARE INSTALLED (IF REQUIRED) • REFRIGERANT RESTRICTION • DIRTY FILTER / EVAPORATOR COIL (HEAT PUMP) • EVAPORATOR MOTOR FAILURE (HEAT PUMP) • ALL ADDITIONAL SAFETIES TIED TO SYN. FAULT TERMINALS SHOULD BE CHECKED	UNIT OPERATION DISABLED

PERFORMANCE SPECIFICATIONS

DIRECT VENT GAS-FIRED PACKAGED TERMINAL THRU-WALL AIR **CONDITIONER**

PART I: SPECIFICATIONS

Size Range:

Cooling: 7,000 to 14,500 BTUh

Heating Output: 12,700 to 18,450 BTUh

PART II: GENERAL

1.01 SYSTEM DESCRIPTION

Single piece, thru-the-wall, electrically controlled unit using a hermetic rotary compressor for cooling and gas heat.

A. Insulated Wall Sleeve:

Shall be entirely constructed of galvanized, heavygauge steel with an Antique Ivory powder paint corrosion-resistant finish. Wall sleeves shall be installed through the wall as shown on plans and shall have factory provisions for use of appropriate fastening devices to secure sleeve to the wall. In no event shall fasteners be installed through the basepan in the bottom of the wall sleeve.

Wall sleeve shall provide excellent thermal insulation, will have superior outdoor noise absorption and be corrosion free for the life of the product.

B. Outdoor Louvered Grille:

Shall be (stamped) (architectural) anodized aluminum as shown on plans. Louver shall be (finished natural) (painted) as shown on the schedule. Louvers shall be easily installed from the inside of the building after the cabinet/wall sleeve has been installed. Special field fabricated louvers must be approved by the PTAC manufacturer as to free area and air circulation requirements.

Outdoor grille shall resist corrosion, breakage and match the color specified on drawing schedule specifications.

C. Subbase:

Subbase will support the wall sleeve when it extends into the room more than 4 inches. Subbase must come from the factory pre-assembled, with a built in receptacle (size as specified on drawing schedule and specifications) or with factory installed hardwire, pre-sized for an exact fit to the unit.

1.02 QUALITY ASSURANCE

System shall be approved and certified by ETL. Chassis capacity and efficiency performance shall be certified in accordance with ARI standard 310/380. Chassis shall meet ASHRAE Standard 90.1 for minimum energy efficiency.

1.03 DELIVERY, STORAGE, AND HAN-**DLING**

- A. The packaging of the chassis shall be sufficient to protect the chassis from damage during shipment via an enclosed truck.
- B. Chassis, wall sleeves, and grilles shall be shipped in separate cartons. Universal handling instructions shall be defined and visible on the carton, from front, back and sides.
- C. Unit shall be stored and handled per manufacturer's recommendations.

2.01 EQUIPMENT

A. General:

Factory-assembled, single-piece heating and/or cooling unit. Contained within the unit enclosure shall be compressor, coils, fans and fan motor, heating means, controls, all wiring and piping, and a full refrigerant charge (R410A).

B. Chassis:

The chassis shall be a factory-assembled, single piece heating and/or cooling unit, that is simple to install and operate. Just slide the chassis into a wall sleeve, plug it into an outlet, and operate after installation. The chassis dimensions shall not exceed 42 in. wide and 16 in. high with room cabinet in place. The chassis shall consist of the following functional sections and components:

Operating Characteristics:

Chassis shall be capable of starting and running at 115 °F ambient outdoor temperature per maximum load criteria of ARI Standard 310/380.

Electrical:

Chassis shall be equipped with a 58 inch power cord. The chassis current draw shall be specified on the chassis nameplate and match electrical requirements specified on the Contract drawing schedule and specifications. The power cord plug configuration shall conform to NEMA standards and the rating shall support the current draw of the electric resistance heater.

For 265 V installations, UL codes require the use of an electrical equipped subbase for power cord usage or hardwire conduit for non-corded installations.

C. Airflow System:

The airflow system shall consist of one permanent split-capacitor, direct-drive permanently lubricated, two-speed fan motor for the indoor and outdoor fans. The outdoor fan shall be a dynamically balanced, corrosion resistant polymer multi-blade axial flow design, with integrated slinger ring. The indoor fan shall be a dynamically balanced, polymer, reverse curve blower wheel, to assure uniform air distribution. The Fan Motor shall be of an enclosed design to reduce the effects of moisture and corrosion.

D. Compressor and Refrigerant:

The rotary-type Compressor shall be fully hermetic with internal and external vibration isolation. The refrigeration system will be sealed and contain a full refrigerant charge (R410A).

E. Coils:

Condenser and evaporator coils to be constructed of high-efficiency, lanced sine wave enhanced aluminum fins and seamless axial grooved copper tubing, necessary to achieve EER and COP rating, as specified on the chassis name plate.

Front Panel (supplied with chassis):

Front panel shall be constructed of 18 gauge powder coated galvanized steel wraparound front sloped room cabinet. It shall have a front louvered surface with integrated air filters that are easily accessible without removing the front panel from the chassis.

G. Fresh Air Vent (optional):

A positive closing automatic fresh air damper must be located within the chassis to provide 72 CFM fresh air during fan operation.

H. Condensate Removal System:

The chassis shall have a condensate removal system consisting of a condensate suction port, to draw and atomize condensate, and a slinger ring integrated in the outdoor fan, to disperse condensate onto the condenser coil to be evaporated.

3.01 CONTROLS

All standard models shall be equipped with electromechanical controls to simplify the serviceability of the unit.

A. Standard Controls:

The chassis shall have standard controls, accessible. The mode selection control shall provide OFF, FAN ONLY, HEAT or COOL operations.

The temperature selection control shall be an adjustable thermostat with upper and lower limits.

B. Continuous Fan:

All standard models shall have a continuous/fan cycle selector switch located behind the front panel. It shall allow the selection of continuous fan operation for maximum comfort or cycle operation (fan only runs with cooling or heating operation) for maximum energy savings.

C. Temperature Limiting:

All standard models shall have Temperature Limiting management built in to the system controls.

The temperature limiting controls allow a room temperature setpoint range to be established, to avoid extreme temperature settings, to maximize energy savings.

D. Thermostat:

Wall thermostat chassis shall come from the factory ready for wall thermostat installation, including a blank out plate in place of the digital control panel. Installation of harness and DIP switch required.

E. Fan Speed Control:

Wall thermostat chassis shall have a user selectable fan speed control switch, on the control panel, to optimize fan speed for maximum comfort.

Protection Circuits:

Compressor shall have automatic reset, over temperature and over current protection. The fan motor shall have an inherent, automatic reset over temperature protection. The electric heater shall have two over temperature protectors.

4.01 GAS FURNACE OPERATION

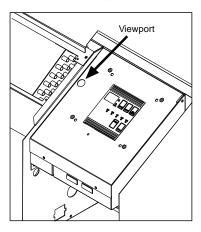
A. When a call for heat is received from the thermostat, the control will check the pressure differential switch for normally open contacts. The combustion blower is then energized, once the pressure switch contacts close, a time delay begins, and the hot surface igniter is activated. Following the igniter heat up period, the gas valve is energized for the trial for ignition period.

- Should the burner fail to light or flame is not detected during the first trial for ignition period, the gas valve is de-energized, and the control repeats the pre-purge cycle before another ignition attempt. The control will attempt two additional ignition trials before going into lockout. The valve relay will be deenergized immediately, and the combustion blower will be turned off, following the optional post purge period.
- C. Recovery from lockout requires a manual reset by either cycling the thermostat or switching the appliance OFF and ON.
- D. If the thermostat is still calling for heat after one hour, the control will automatically reset and attempt to ignite the burner again.
- If the established flame signal is lost while the burner is operating, the control will respond within 0.8 seconds. The gas valve is de-energized immediately and a new ignition sequence begins in an attempt to relight the burner. If the burner does not light, the control will de-energized the gas valve. The system will make two more attempts to relight the burner. If the burner does not relight, the control will go into lockout as noted previously. If the flame is re-established, normal operation resumes.
- Following burner ignition, the circulating fan will delay starting until the heat exchanger warms up. Following burner extinction, the circulating fan will continue to operate until the heat exchanger cools down. Circulating fan operation may terminate immediately if the appliance is switched OFF.
- G. The appliance will attempt up to three ignition trials with a purge period in between. Should ignition not be achieved after the third attempt, the appliance will enter a lockout mode.
- H. Combustion airflow is continually monitored during an ignition sequence by the airflow switch. If during the initial call for heat the airflow switch contacts are in the closed position for 30 seconds without an output to the combustion blower, an airflow fault will be declared and the control will remain in this mode with the combustion blower off waiting for the airflow switch contacts to open.

- If the pressure differential switch remains open for more than 30 seconds after the combustion blower is energized, an airflow fault will be declared and the control will stay in this mode with the combustion
- When proper airflow is detected from the pressure differential switch, the control begins the prepurge period with normal ignition sequence.
- K. If the pressure differential signal is lost while the burner is firing, the control will immediately de-energize the gas valve and the combustion blower will remain on. If the call for heat remains, the control will wait for proper airflow to return. If the proper airflow is not detected after 30 seconds, an airflow blower fault signal will flash at the LED. If the proper airflow is detected at any time, a normal ignition sequence will begin with the pre-purge period.
- The LED can be viewed without removing the unit from the wall by removing or tilting front cover forward and observing it through the clear view port located to the left of the controls.
- M. If at any time the main valve fails to close completely and maintain a flame, the full time flame sense circuit will detect and energize the combustion blower. Should the main valve later close completely removing the flame signal, the combustion blower will power off following the optional post purge period for reconditioning the system.
- N. Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance before shutting off the electrical supply.

4.02 ACCESSORIES:

A. Deep Wall Metal Wall Sleeve (up to 28-in.) shall be a one-piece, extended wall sleeve, with factory installed insulation and deep wall baffles integrated.



- B. Architectural grille shall be painted aluminum for a superior color match to the building.
- C. Subbase shall be pre-assembled from the factory and UL listed.

Subbase options include:

- 1. Non-electrical subbase: The non-electrical subbase shall provide mechanical support and requires no wiring.
- Electrical subbase: The electrical subbase shall be pre-assembled with factory-installed electrical junction box containing a receptacle for corded
- 3. Hardwired subbase: The hardwired electrical subbase shall be pre-assembled with factory installed electrical junction box containing 19 inches of flexible conduit (for a perfect fit to the unit) and all mating connections.
- D. Hardwire kit shall provide a permanent connection to the unit.

The hardwire kit mounts on the front right side of the unit and shall have 36 inches of flexible steel conduit and a connector for easy connect/disconnect.

Condensate Drain

This universal drain kit shall be used internally or externally to route excess condensate to a drainage system. It can be field-installed on any Islandaire wall sleeve. The drain kit shall be attached to the exterior right or left side of the wall sleeve for external draining or may be mounted to the bottom of the wall sleeve for internal draining.

Lateral Duct

The kit shall include an adapter plenum, extension duct, wall register and wall molding. The lateral duct system allows one system to heat or cool two adjacent rooms, by directing up to 30% of the airflow to the adjacent room. See page 33 for detailed specification.

G. Front Desk Control

Unit controls shall provide front desk control on all units, allowing individual units to be turned on and off from a remote location or by a motion sensing device. Front desk controls shall interface to most energy management systems.

5.0 GENERAL REQUIREMENTS

- A. Provide a packaged terminal electric air conditioning/natural gas heating unit listed in the following specifications.
- B. Each unit shall consist of a chassis, wall sleeve, exterior grille, and finished inside wrap around room cabinet. Units shall be CSA approved, AGA Design Certified, and CGA Design Certified. Units shall be manufactured by Islandaire Inc., or equivalent.
- Shall be a slide-in, plug-in chassis with self-contained refrigerant system consisting of a vibration-isolated compressor, separate condenser and evaporator fan motors, condenser fan and coil, evaporator dual blower and coil, copper refrigerant tubing, operating controls and positive condensate removal system. Chassis shall be constructed of heavy gauge commercial quality G-60 galvanized steel with baked-on powder coat painted base pan/firewall and stainless steel compressor studs for unsurpassed corrosion resistance.

- D. Refrigeration system is constructed of a vibration isolated, hermetically sealed, thermally protected rotary compressor.
- E. Compressors have protection to prevent operation below 35 °F. Capillary tube refrigerant control sized according to the cooling BTU ratings.
- Indoor freeze protection preventing room from going below 50 °F, is standard.
- Refrigerant metering device shall be a capillary tube with compressor freeze protection.
- H. Air moving system is a dual motor system, which consists of a multi thermally-protected PSC evaporator motor employing dual forward curved centrifugal blower wheels, providing between 280 and 460 CFM depending on unit capacity, along with a separate thermally-protected PSC condenser motor employing an aluminum propeller-type fan blade providing 600 CFM. A blow-through condenser airflow design for increased efficiencies.
- Tubular heat exchanger with integral flame spreaders constructed of welded commercial quality stainless steel located within the indoor air stream as not to be visible or accessible through the indoor discharge air grill or return air area of the unit. Sealed combustion air blower, combustion chamber and heat exchanger, which uses only outdoor air in the combustion process. Electronically controlled combination pressure regulator and gas valve, pilotless hot ceramic, flame sensing ignition system, which is thermostatically controlled by the indoor room temperature in the heating cycle.
- Unit mounted electronic controls providing OFF, HI FAN, LO FAN, HI HEAT, LO HEAT, HI COOL, and LO COOL settings.
- K. All chassis parts shall be constructed of commercial grade galvanized steel. The firewall base pan shall be constructed of galvanised steel with a powderedcoated paint for maximum corrosion resistance.

- Air filtration shall be accomplished with a permanent washable filter that is accessible without the use of tools.
- M. Factory installed electronically-controlled hot ceramic ignition system. Sealed combustion chamber ensures no room air is used. Heat exchanger shall be of BTU/H capacity shown in the general specifications. Heat exchanger shall not be visible or accessible through the indoor room cabinet discharge grille.
- N. Condenser and evaporator coils shall be crosshatched copper tubes and faceted aluminum plate fins mechanically expanded into the tubes for maximum heat transfer and maximized energy efficiency.
- O. Indoor cooling condensate shall drain to the outdoor coil for re-evaporation. Vaporized condensate shall be exhausted out through the exterior louver.
- Room Cabinet. Each chassis shall be equipped with an 18-gauge powder coated galvanized steel wraparound front sloped room cabinet with rounded corners.

- Q. Wall Sleeve. Shall be of a single piece design with no assembly required, constructed of 18-gauge galvanized steel with a baked-on powder coat finish. At no time should any fastener be used through the base pan of the wall sleeve as to protect the water integrity of the assembly.
- R. Exterior Grille. Shall be easily installed from inside of the building after the wall sleeve is set in place. Exterior grilles/louvers supplied by others must be approved as to free area and design by air conditioner manufacturer and shall have a free area of 537 square inches.
- Natural Gas. Unit is designed to operate on natural gas with a minimum gas inlet pressure of 5.0" W.C., and a maximum of 14.0" W.C. Gas supply connection may be made from the inside or outside, depending on local code or design requirements.
- Approvals. Gas-fired PTAC unit shall be ETL Approved, AGA Design Certified, and CGA Designed Certified.
- U. Warranty. Shall be one year limited, full parts and labor warranty and a limited five-year warranty on the compressor and heat exchanger.

NOTES

Typical Warranty

LIMITED WARRANTY COVERING ISLANDAIRE 'EZ SERIES GS' GAS HEATING / ELECTRIC COOLING THRU-THE-WALL AIR CONDITIONERS

ONE-YEAR PARTS AND LABOR PLUS ADDITIONAL 2ND THROUGH 5TH YEAR PARTS ONLY ON THE COMPRESSOR AND HEAT EXCHANGER EFFECTIVE FROM DATE OF INSTALLATION*

THIS WARRANTY APPLIES TO THE AIR CONDITIONER UNIT ("THE UNIT") THAT IS THE SUBJECT OF THIS SALE AND IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. THIS WARRANTY DOES NOT APPLY TO ANY ACCESSORY THAT IS NOT A PART OF THE UNIT AS SHIPPED BY ISLANDAIRE. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL EQUIPMENT AT THE ORIGINAL INSTALLATION LOCATION. PROOF OF PROPER, ROUTINE MAINTENANCE WILL BE REQUIRED IN ORDER TO MAINTAIN EXTENDED WARRANTY.

ISLANDAIRE the "Company" of St. James, New York warrants that the unit is free from defects in material and workmanship under normal use and service, for the twelve-month period following the date of installation*.

WARRANTY Coverage includes repair or replacement, at the Company's option, of any defective parts that fail under normal use for the first 365 days after the equipment installation date under the terms, conditions and limitations of the warranty. All defective parts shall be returned within 30 days after removal to the Company at such locations as the Company may designate. Islandaire reserves the right to impose an inspection charge and/or a restocking fee in cases where parts or equipment have been improperly returned as defective and/ or as being in warranty. A warranty part can only be replaced one time over the duration of the warranty period.

WARRANTY coverage also includes Labor Charges on all covered repairs performed by an Islandaire Authorized Service Agent in accordance with the terms, conditions and limitations of the warranty. Extra charges such as emergency calls, nuisance calls, mileage, overtime or shipping are not covered.

On occasion, wires may become disconnected or components may be dislodged from their bases as a result of rough handling during transport, causing improper functioning of the unit. Immediately following installation, the installing contractor is responsible to check, test and start the unit, including physically operating the unit in both cooling and heating modes, and correcting any minor deficiencies noted. Additionally, the installing contractor is responsible to provide unit operation instruction by an experienced person.

WARRANTY Coverage of the Compressor and Heat Exchanger parts only shall continue from the 2nd through 5th year from date of equipment installation* Labor is not included.

IN NO EVENT SHALL THE COMPANY'S MAXIMUM LIABILITY EXCEED THE SELLING PRICE OF THE UNIT CLAIMED TO BE DEFECTIVE.

As a condition precedent to the Company's obligation under this WARRANTY, it shall be the obligation of the Owner during the designated WARRANTY period to furnish the following information to the Company within three days after unit failure: 1) Model Number and Serial Number of unit involved, 2) A full and complete description of the problem encountered with the unit. Upon receipt of the above information, the Company will reply to the Owner within a period not to exceed fifteen working days, with a description of the action the Company desires to take.

For warranty service, contact an Islandaire Authorized HVAC Service Agent.

Contact the Islandaire Customer Service Department at 800-886-2759.

To validate this WARRANTY, you must complete the registration information below and return the pre-addressed card to Islandaire within seven days of equipment installation. The actual warranty type for your equipment is stated on the original Islandaire invoice for said equipment. Proof of installation date is required. *Please be advised, where no Warranty Registration Card has been returned, the original date of invoice of the equipment shall become the start date of the warranty period.

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Vertical Unit Available

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