

# TWO-STAGE GEOTHERMAL HEAT PUMPS WITH TWO-WAY COMMUNICATING CONTROLS

'HZ' Series

Our self-contained HZ Series is one of the most sophisticated geothermal units available today—yet one of the easiest to install and operate. The DMX2 digital controller analyzes information from internal sensors and relays the information to the intelligent gateway that customizes the operation for optimal efficiency and comfort.

The intelligent gateway displays operational or diagnostic data in plain English on a communicating thermostat, and the thermostat can even be used for configuring the system's operation. If a communicating thermostat is not used, an optional separate diagnostic tool is available to access the data, and a port for the tool is built in.

Variable speed flow technology works with built-in water circulation components to vary the water flow according to current conditions, and eliminating the need for an external flow center. With a modulating valve for ground water applications or a variable speed pump for ground loops, the flow is automatically adjusted depending on source water temperature, full or partial load operation, and other conditions.

The two stage compressor runs at part capacity most of the time to maintain a consistent temperature/humidity level. When there's demand, the unit instantly shifts to 100% capacity. The ECM variable speed blower motor automatically adapts to system requirements, delivering maximum efficiency and comfort.



The HZ Series is designed for open loop, closed loop and boiler/cooling tower applications, and the compact size makes it ideal for replacements as well as new construction.

## **HZ Series 2 to 6 Tons**

**With Electronic Digital  
Controller**

**Available in vertical upflow,  
vertical downflow, and  
horizontal configurations**



**Outstanding Limited Warranty—  
12 years on compressor and parts**  
(Some limitations apply; see printed  
warranty for details.)

*Comfort-Aire*®



## Features

- **Extended Range Refrigerant Circuit**—Capable of geothermal ground loop and ground water applications, as well as boiler/cooling tower water loop installations
- **Scroll Compressor**—Dependable two stage design is efficient, reliable, quiet
- **Large Filter**—Captures pollutants for enhanced indoor air quality, can be quickly changed as needed
- **Micro-Channel Air Heat Exchanger**—Proven technology delivers superior heating efficiency (-024 through -048 models)
- **Quiet Operation**—Double isolation compressor mounting system and insulated air handler compartment make HZ one of industry's quietest units
- **Easy Service Access**—Multiple access panels and swing-out control box for fast installation, easy maintenance
- **Built-in Water Circulation Components**—Automatically varies the water flow to save on pump energy usage and add reliability; eliminates the need for external flow centers or two-way valves, saving installation time
- **Five-Year Free Labor Warranty**—Installing contractor must complete and submit Start-Up Certification for system to qualify (all other warranty conditions must be met)

# Designed for reliable, quiet operation and long life



## Dependable

- Intelligent gateway allows users to monitor and control operation of system, and to diagnose any system problems, with messages shown in plain English
- Scroll compressor is rated for heat pump use and designed for quiet operation and efficiency
- DMX2 controller uses information from smart components to precisely control the variable speed fan and variable speed water pump or modulating valve for efficiency and increased reliability
- Insulated, stainless steel drain pan has condensate overflow protection
- Limited number of moving parts means less wear and long life expectancy
- Tin-plated air coil resists corrosion, prolonging equipment life in most environments and improving efficiency

## Quiet Operation

- Double spring and grommet isolation mounting system for the compressor reduces vibration and related sound
- Flexible torsion motor mounting further reduces vibration
- Compressor compartment is insulated; it's also separated from the air handler by an insulated divider

## Installation Flexibility

- One of the broadest range of options available in geothermal today allows the contractor to customize the unit to the individual installation requirements or preferences
- Swivel connectors make water hook-up quick and easy
- Compact size is ideal for tight spaces or retrofit applications

## Easy Servicing

- Components can be accessed from multiple sides, and swing-out control board simplifies service
- Built-in variable water flow eliminates the time and hassle of installing bulky external flow controllers
- Service warning on the thermostat allows homeowner to call dealer with fault information, while Service Mode shows conditions at time of the fault to help serviceman make a quick, proper diagnosis

### All models 208/230V-1-60

Model	Capacity Modulation	Ground Water				Ground Loop				Shipping Weight (lbs)
		Cooling Water 59° F		Heating Water 50° F		Cooling Full Load 77° F Part Load 68° F		Heating Full Load 32° F Part Load 41° F		
		BTUH	EER	BTUH	COP	BTUH	EER	BTUH	COP	
HZV/HZD/ HZH 024	Full	28,500	26.4	25,800	5.3	26,000	19.9	20,200	4.1	213
	Part	22,000	34.1	19,000	5.8	20,800	28.0	16,800	5.0	
HZV/HZD/ HZH 036	Full	42,100	26.1	37,900	5.2	39,000	20.3	29,700	4.4	213
	Part	30,700	34.4	27,300	5.5	29,700	29.6	23,800	4.8	
HZV/HZD/ HZH 048	Full	55,000	25.3	46,800	4.6	49,600	19.3	36,400	4.0	239
	Part	41,800	32.9	34,800	5.0	39,100	27.4	29,800	4.4	
HZV/HZD/ HZH 060	Full	71,500	24.4	63,200	4.8	66,200	18.8	48,700	3.9	250
	Part	53,100	32.4	44,000	5.0	51,200	26.7	38,100	4.4	
HZV/HZD/ HZH 070	Full	77,700	22.5	71,400	4.4	71,700	16.9	55,800	3.7	306
	Part	60,800	28.6	53,200	4.5	58,100	23.2	46,000	3.9	

Cooling capacities based on 80.6° F DB, 66.2° F WB entering air temp. Heating capacities based on 68° F DB, 59° F WB entering air temp. All ratings based on 208V operation.

Due to ongoing product improvements, specifications and dimensions are subject to change and correction without notice or incurring obligations. Determining the application and suitability for use of any product is the responsibility of the installer. Additionally, the installer is responsible for verifying dimensional data on the actual product before beginning any installation preparations. All products meet applicable regulations in effect on date of manufacture; however, certifications aren't necessarily granted for life of the product. It is the responsibility of the applicant to determine whether a specific model qualifies for third party incentive/rebate programs (Federal, state, utilities, etc.).



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