

HEAT CONTROLLER, INC.

**Installation, Operation and  
Maintenance Manual**

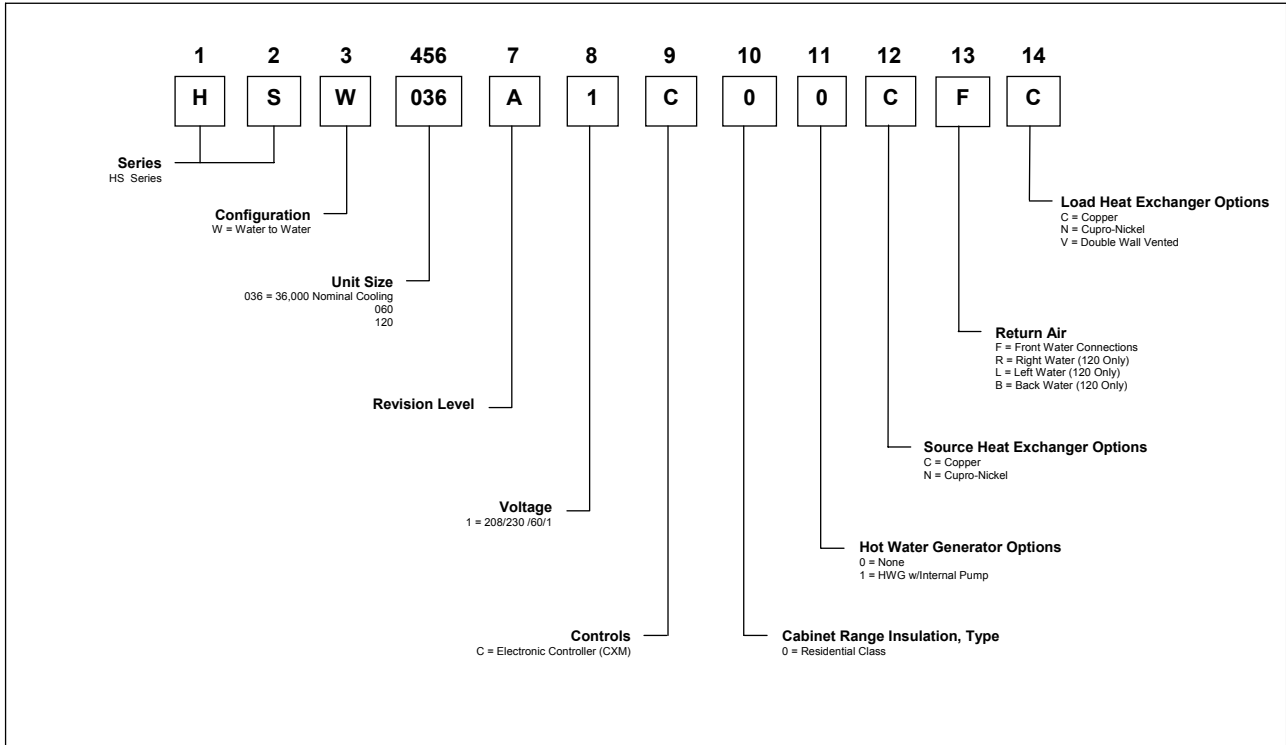
**HSW Series  
Water to Water  
Heat Pump**

HEAT CONTROLLER, INC.

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**THE QUALITY LEADER IN CONDITIONING AIR**

## MODEL NOMENCLATURE – WATER-TO-WATER



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# SAFETY

## Safety

Warnings, cautions and notices appear throughout this manual. Read these items carefully before attempting any installation, service or troubleshooting of the equipment.

**DANGER:** Indicates an immediate hazardous situation, which if not avoided will result in death or serious injury. DANGER labels on unit access panels must be observed.

**WARNING:** Indicates a potentially hazardous situation, which if not avoided could result in death or serious injury.

**CAUTION:** Indicates a potentially hazardous situation or an unsafe practice, which if not avoided could result in minor or moderate injury or product or property damage.

### ⚠ WARNING! ⚠

**WARNING!** Verify refrigerant type before proceeding. Units are shipped with R-22 refrigerant.

### ⚠ WARNING! ⚠

**WARNING!** To avoid the release of refrigerant into the atmosphere, the refrigerant circuit of this unit must be serviced only by technicians who meet local, state, and federal proficiency requirements.

### ⚠ WARNING! ⚠

**WARNING!** All refrigerant discharged from this unit must be recovered **WITHOUT EXCEPTION**. Technicians must follow industry accepted guidelines and all local, state, and federal statutes for the recovery and disposal of refrigerants. If a compressor is removed from this unit, refrigerant circuit oil will remain in the compressor. To avoid leakage of compressor oil, refrigerant lines of the compressor must be sealed after it is removed.

### ⚠ CAUTION! ⚠

**CAUTION!** To avoid equipment damage, **DO NOT** use these units as a source of heating or cooling during the construction process. The mechanical components will quickly become clogged with construction dirt and debris, which may cause system damage.

## GENERAL INFORMATION

### Inspection

Upon receipt of the equipment, carefully check the shipment against the bill of lading. Make sure all units have been received. Inspect the packaging of each unit, and inspect each unit for damage. Insure that the carrier makes proper notation of any shortages or damage on all copies of the freight bill and completes a common carrier inspection report. Concealed damage not discovered during unloading must be reported to the carrier within 15 days of receipt of shipment. If not filed within 15 days, the freight company can deny the claim without recourse. Note: It is the responsibility of the purchaser to file all necessary claims with the carrier. Notify your equipment supplier of all damage within fifteen (15) days of shipment.

### Storage

Equipment should be stored in its original packaging in a clean, dry area. Store units in an upright position at all times. Stack units a maximum of 3 units high.

### Unit Protection

Cover units on the job site with either the original packaging or an equivalent protective covering. Cap the open ends of pipes stored on the job site. In areas where painting, plastering, and/or spraying has not been completed, all due precautions must be taken to avoid physical damage to the units and contamination by foreign material. Physical damage and contamination may prevent proper start-up and may result in costly equipment clean-up.

Examine all pipes, fittings, and valves before installing any of the system components. Remove any dirt or debris found in or on these components.

### Pre-Installation

Installation, Operation, and Maintenance instructions are provided with each unit. Horizontal equipment is designed for installation above false ceiling or in a ceiling plenum. Other unit configurations are typically installed in a mechanical room. The installation site chosen should include adequate service clearance around the unit. Before unit start-up, read all manuals and become familiar with the unit and its operation. Thoroughly check the system before operation.

### Prepare units for installation as follows:

1. Compare the electrical data on the unit nameplate with ordering and shipping information to verify that the correct unit has been shipped.
2. Keep the cabinet covered with the original packaging until installation is complete and all plastering, painting, etc. is finished.
3. Verify refrigerant tubing is free of kinks or dents and that it does not touch other unit components.
4. Inspect all electrical connections. Connections must be clean and tight at the terminals.

5. Loosen compressor bolts on units equipped with compressor spring vibration isolation until the compressor rides freely on the springs. Remove shipping restraints.
6. REMOVE COMPRESSOR SUPPORT PLATE 1/4" SHIPPING BOLTS (2 on each side) TO MAXIMIZE VIBRATION AND SOUND ATTENUATION.
7. Locate and verify any hot water generator (HWG)

### ⚠ CAUTION! ⚠

**CAUTION! DO NOT** store or install units in corrosive environments or in locations subject to temperature or humidity extremes (e.g., attics, garages, rooftops, etc.). Corrosive conditions and high temperature or humidity can significantly reduce performance, reliability, and service life. Always move units in an upright position. Tilting units on their sides may cause equipment damage.

**NOTICE!** Failure to remove shipping brackets from spring-mounted compressors will cause excessive noise, and could cause component failure due to added vibration.

### ⚠ CAUTION! ⚠

**CAUTION! CUT HAZARD** - Failure to follow this caution may result in personal injury. Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing, safety glasses and gloves when handling parts and servicing heat pumps.

## HSW Physical Data

Model	036	060	120
Compressor/qty	Scroll/1		Scroll/2
Factory Charge each circuit - (oz.) [kg]	48 [1.36]	64 [1.81]	64 [1.81]
<b>Indoor/Load Water Connection Size</b>			
IPT - ( in. )	3/4	1	1-1/2
<b>Outdoor/Source Water Connection Size</b>			
IPT - ( in. )	3/4"	1"	1-1/2"
<b>HWG Water Connection Size</b>			
IPT - ( in. )	1/2"	1/2"	-
Weight - Operating - lbs. [kg]	236 [107]	343 [156]	725 [329]
Weight - Packaged - lbs. [kg]	255 [116]	362 [164]	765 [347]

Spring mounted compressor

Balanced Port Expansion Valve

Insulated Source and Load Water Coils with optional water/refrigerant circuit insulation package

Compressor on (Green) and Fault (Red) Light

CXM Microprocessor Controllor

Refrigerant 22













































