



# INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

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No. 0110000525 (3)

## Model HCR8.50 Water Chiller

HCR8.50 is a 220-240VAC, 50 Hz remote chiller which provides up to 6.7 gallons (25 liters) per hour of cold water when tested to ASHRAE 18. This chiller can provide chilled water to a wide variety of water fountains. It can be concealed under a counter, between or within walls (check local codes) or high on a wall or column. It is ideally suited for factories, cafeterias, restaurants, schools and offices. Installation is intended to be performed by qualified persons such as certified electricians and plumbers.

Installation, maintenance or cleaning shall not be performed by children.

**NOTE TO INSTALLER:** Please leave this information with the Maintenance Department.

Haws electric water chillers are not designed or recommended for outdoor or corrosive environments such as enclosed chlorinated pool areas. Consideration must be made at the time of installation to adhere to state and/or local codes and environmental/atmospheric conditions such as, but not limited to, dust, corrosion, freezing etc. These conditions will void the warranty.

A ground-fault circuit breaker shall be installed in the branch circuit supplying fountain equipment. Reference NEC 422.52.

**CAUTION!** Prior to making any electrical connections, verify with a voltmeter that power from the service panel is **off**.

**NOTICE:** This water chiller must be connected to the water supply using a dielectric coupling.

### IMPORTANT! INSTALLER PLEASE NOTE

The grounding of electrical equipment such as telephone, computers, etc., to water lines is a common procedure. This grounding may be in the building, or may occur away from the building. This grounding can cause electrical feedback into a water chiller, creating an electrolysis which causes a metallic taste or an increase in the metal content of the water. This condition is avoidable by using the proper materials indicated under Installation Section.

## SAFETY PRECAUTIONS

- A. Water supply line pressure must be maintained between 20 psi and 105 psi. Bi-level water fountain units require a minimum of 40 psi.
- B. Do not allow water to come into contact with live electrical wires because short-circuiting and shocks can occur.
- C. **WARNING:** Beware of rotating fans when covers are removed.
- D. Care should be taken not to puncture refrigeration system lines. Some lines contain gas under high pressure.
- E. Install chiller to conform to all applicable codes, including the National Electrical Code.

**SHOULD YOU EXPERIENCE DIFFICULTY WITH THE INSTALLATION OF THIS MODEL PLEASE CALL:**

**TECHNICAL SUPPORT: 1-800-766-5612**

**FOR CUSTOMER SERVICE: 1-888-640-4297**

## **INSTALLATION**

**COMPLETE THE INSTALLATION OF THE WATER RELATED ITEMS BEFORE CONNECTING ELECTRICAL RELATED ITEMS**

**NOTE: This chiller is rated for ISO 23953-2 Climate Classes 5 and 8.**

<b>Test room climate class</b>	<b>Dry Bulb Temperature (°C)</b>	<b>Relative Humidity (%)</b>	<b>Dew Point (°C)</b>	<b>Water vapour mass in dry air (g/kg)</b>
5	40	40	23.9	18.8
8	24	55	14.4	10.2

**NOTE:** Locate unit no more than 8ft (2.4m) away from fixtures which it supplies. Chilled water tubing/piping run must be covered with appropriate insulation in order to conserve temperature and avoid condensation.

**STEP 1:** Remove the L shaped “front” panel by removing the 9 corresponding screws.

**STEP 2:** Open Area Installation – To ensure proper ventilation; maintain a 4” (102mm) clearance from the louvers at the front and back of the unit.

Cavity Installation - When mounting unit in a cavity or behind a wall, maintain a minimum space of 4” (102mm) on each side, 4” (102mm) on the top and a depth of 12” (305mm). Minimum Cavity dimensions (exclusive of space required for water connections and strainer) are as follow:

21.3” (541 mm) width

21.2” (538 mm) height

12.0” (305 mm) depth

**STEP 3: Water-** Connect the strainer to the water inlet (labeled “Water In”) of the unit, and then connect the water supply line to the water strainer. Connecting lines to be of unplated copper, thoroughly flushed to remove all foreign matter before being connected to chiller. Connect the water outlet (labeled “Water Out”) of the unit to the water fountain. Refer to Figure 2 – Page 7 and Figure 6 – Page 8.

### **NOTES:**

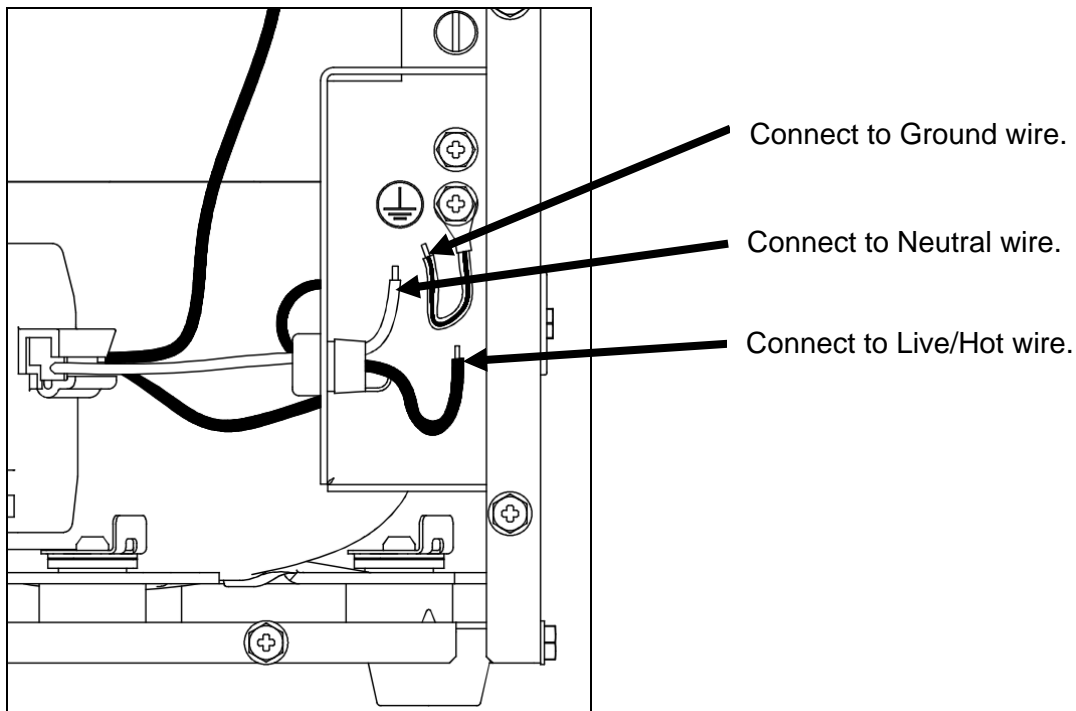
1. For all plastic push-in type fitting connections, only connect NSF-61 copper or plastic tubing. Stainless steel or glass tubing is not recommended. The following assembly instructions must be followed to ensure a watertight connection:
  - a. Cut tubing square and clean.
  - b. Mark from end of tube the length of insertion (See table below).

- c. Push tube into the fitting until it bottoms out.
- d. To remove, depress collet and pull tubing out.

Tube Sizes	O.D. Tolerance	Insertion Depth
1/4"	±.005"	11/16"
3/8"	±.005"	3/4"
1/2"	±.005"	7/8"

- 2. Use NSF-61 approved pipe joint sealant on all threaded water connections.
- 3. Do not use with water that is microbiologically unsafe or unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.
- 4. Use the cardboard inserts from the box to support the unit while preparing for installation by placing unit face down on inserts.

**STEP 4: Electrical-** HCR8.50 (220-240VAC/ 50HZ/ 1.7 AMPS). Make sure power supply is identical in voltage, cycle, and phase to that specified on chiller serial plate. Never wire compressor directly to the power supply. Wiring shall be completed by a qualified person in accordance with applicable electrical codes and standards.



**STEP 5: Temperature Control-** Factory set at 50°F (±5°) under normal conditions. For colder water, adjust screw on the thermostat (Fig. 1, Item 2 – See page 6) in clockwise direction.

The *minimum* thermostat set point varies with altitude. Adjust 1/16<sup>th</sup> of a turn counter clockwise (warmer) from cold position for every 1500 ft. above sea level to prevent freezing.

**STEP 6:** Rotate fan blade and ensure proper clearance and free fan action.

**STEP 7:** Re-secure the front panel with the same 9 sheet metal screws.

## **START-UP**

**STEP 1:** Open the water supply valve.

**STEP 2:** Purge all air from water lines by establishing water flow i.e. operating bubbler valve of corresponding water fountain. A steady water stream assures all air has been purged. Check for any water leaks.

**STEP 3:** Connect to electrical power.

## **TROUBLESHOOTING & MAINTENANCE**

### **STRAINER CLEANING:**

Ensure water source has been shut off, and depressurize the system by operating the water fountain button. Remove the strainer cleanout plug (Fig 6 – Page 8). Be aware water may leak from the strainer connection. Remove the strainer element (mesh screen) and remove any debris from the mesh and the strainer. Once clean, place the strainer element in the cleanout plug and insert both into the housing. Thread the strainer cleanout plug into the housing until it bottoms out. After bottoming, do not add additional torque.

### **VENTILATION:**

Cabinet louvers and condenser fins should be periodically cleaned with brush, air hose or vacuum cleaner. Take care not to damage the foil like fins. Excess dirt or poor ventilation can cause no cold water and compressor cycling on the compressor overload protector.

### **LUBRICATION:**

Motors are lifetime lubricated.

### **DISCONNECTION OF QUICK CONNECT WATER FITTINGS:**

This chiller is provided with lead-free connectors which utilize an O-ring seal. To remove tubing from the fittings, relieve water pressure; push in on gray collar while pulling on the tubing.

# HAWS® REMOTE WATER CHILLER :: LIMITED WARRANTY

## PLEASE LEAVE THIS WARRANTY WITH OWNER

*HAWS* warrants the remote water chiller, when installed in accordance with the installation instructions, against defects in material and workmanship under normal use as follows:

1. **One (1) year** from the date of installation or 18 months from date of shipment from *HAWS*' factory, whichever occurs first, *HAWS* will repair or replace any defective part which upon *HAWS*' sole determination is a result of defective material or workmanship.
2. **Five (5) years** from the date of shipment from *HAWS*' factory, *HAWS* warrants the complete hermetically sealed refrigeration system which includes the compressor, evaporating coil and condensing coil. This does not cover the thermostat, fan, relay, overload or capacitors.

This warranty does not cover any damage due to accident, misuse, abuse, negligence, alteration, misapplication, or any part of the water system if they have become fouled due to liming, dirt, unsatisfactory water conditions, or faulty plumbing. The foregoing Limited Warranty applies only when the product is installed and operated in accordance with *HAWS*' written instructions included with each unit.

Adjustment to the water stream and temperature, field service calls to replace or install parts, and unauthorized service work cannot be claimed under this warranty. Finish deterioration due to normal use or exposure is not covered by this warranty.

To obtain warranty service, you must call either the factory or an authorized service agent. For the nearest authorized service center or *HAWS* factory service, call (800) 766-5612.

This warranty is valid in continental United States and Canada only.

All remote water chillers sold and/or shipped outside of the continental United States and Canada have a one (1) year warranty coverage on parts only. No extended warranty on the hermetically sealed refrigeration system is allowed.

### OWNER'S OBLIGATION

To pay for services not covered by this warranty such as minor adjustments to flow and temperature and diagnose for faults. Any appearance imperfections are to be noted at the time of installation and the installer or the supplier notified without delay.

To prepay the freight to *HAWS* or authorized service center for any part or remote water chiller returned under this warranty. To provide the remote water chiller serial number when making claims as age can only be determined by this number.

### HAWS' OBLIGATION

*HAWS*' obligation under this warranty is limited to repairing or replacing any part of the remote water chiller which, upon its examination, is found to be defective due to workmanship or material. In addition, *HAWS*' obligation is limited to labor performed at *HAWS*' factory. Claims will not be accepted if serial nameplate is mutilated or removed. The warranty applicable to any replacement unit shall be the remaining warranty period on the replaced unit. This Limited Warranty does not include payment for any field labor to provide for normal maintenance including, but not limited to, adjustments such as water height, water temperature or electric eye sensitivity. This Limited Warranty is voided if repairs are made by an unauthorized party. This Limited Warranty is applicable only to the first person who purchases the product other than for resale.

Repair of replacement as provided under this warranty is the exclusive remedy of the user. *HAWS* shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on this product.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, EXPRESSED OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS EXPRESSLY PROVIDED HEREIN, *HAWS* MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO ANY PERSON. THIS WARRANTY MAY NOT BE ALTERED, VARIED, **OR EXTENDED**, EXCEPT BY A WRITTEN INSTRUMENT EXECUTED BY *HAWS*. THE REMEDY OF REPAIR OR, WHERE APPLICABLE, REPLACEMENT AS PROVIDED UNDER THIS LIMITED WARRANTY IS EXCLUSIVE. IN NO EVENT SHALL *HAWS* BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES TO ANY PERSON, WHETHER OR NOT OCCASIONED BY NEGLIGENCE OF *HAWS*, INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF USE, COSTS OR SUBSTITUTION, PROPERTY DAMAGE, OR OTHER MONETARY LOSS.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Chiller Model Number \_\_\_\_\_

Serial Number \_\_\_\_\_

Installation Date \_\_\_\_\_

Installation Address \_\_\_\_\_

State \_\_\_\_\_

Installed By \_\_\_\_\_



ITEM	DESCRIPTION	PART NO.
SERVICEABLE PARTS		
1	FAN BLADE (INCL NUT, DAMPER, 2X 5" CABLE TIE)	HC111
2	THERMOSTAT (INCL 2X 5" CABLE TIE)	HC112
3	STRAINER SUB-ASSEMBLY	HC113
4	FAN MOTOR, 220 V (INCL NUT, DAMPER, 2X 5" CABLE TIE)	HC210
5	COMPRESSOR THERMAL PROTECT, 220 V	HC211
6	COMPRESSOR START RELAY, 220 V	HC212

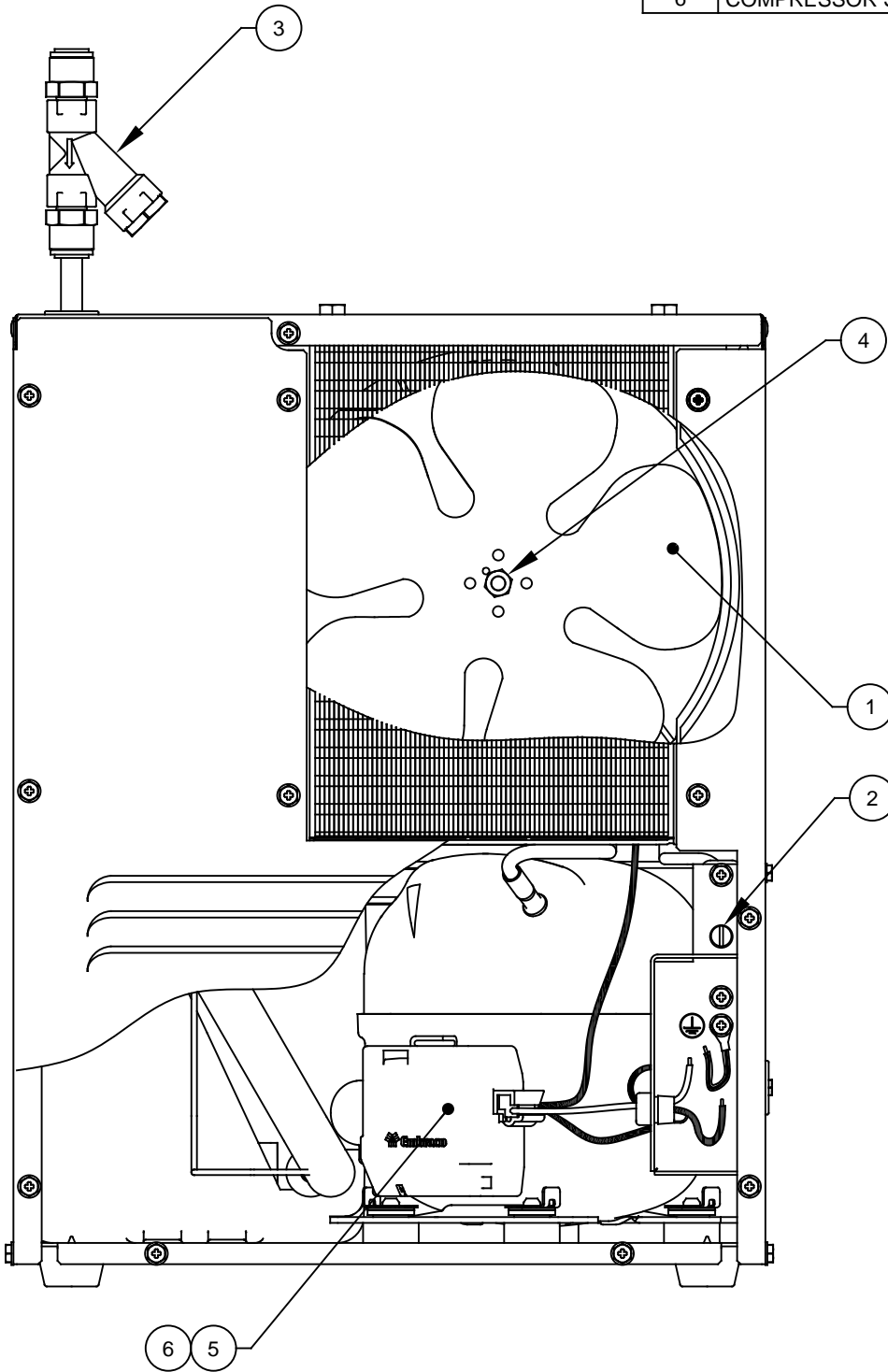

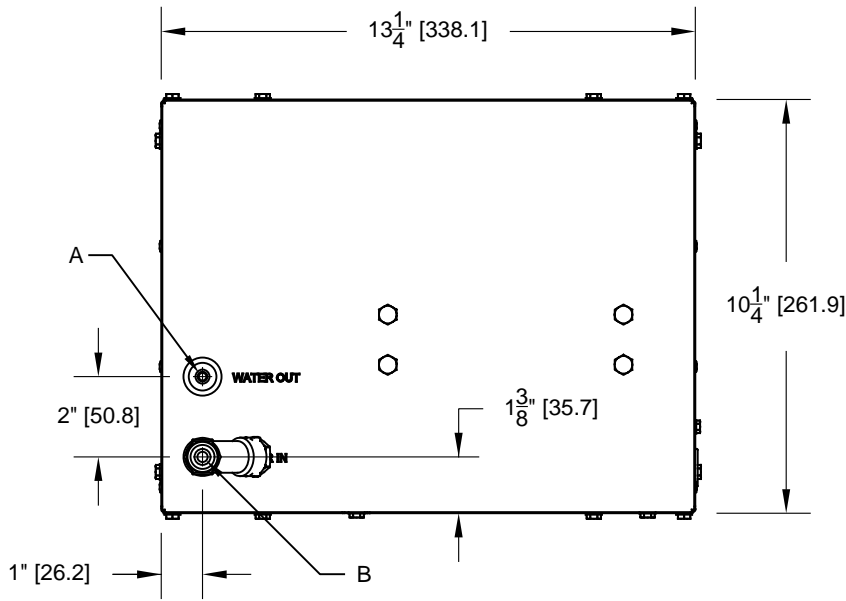


FIG. 1

WHEN ORDERING PARTS PLEASE SPECIFY MODEL NUMBER.

		<b>Haws</b> <sup>®</sup>		1455 KLEPPE LANE SPARKS, NEVADA 89431 (775) 359-4712 FAX (775) 359-7424 E-MAIL: HAWS@HAWSCO.COM WEBSITE: WWW.HAWSCO.COM	
				ECN NO. 5099 DRAWN HM APPROVED JL	REVISED PER ECN: 5401 DATE 05/05/16 DATE
SCALE: NA		DRAWING TYPE: PARTS BREAKDOWN		SIZE: A SHEET 1 OF 1	



CALLOUT LEGEND	
A	1/4" OD WATER OUTLET
B	3/8" OD WATER INLET
C	TEMPERATURE CONTROL
D	JUNCTION BOX
E	ELECTRICAL WIRING OPENING

FIG. 2

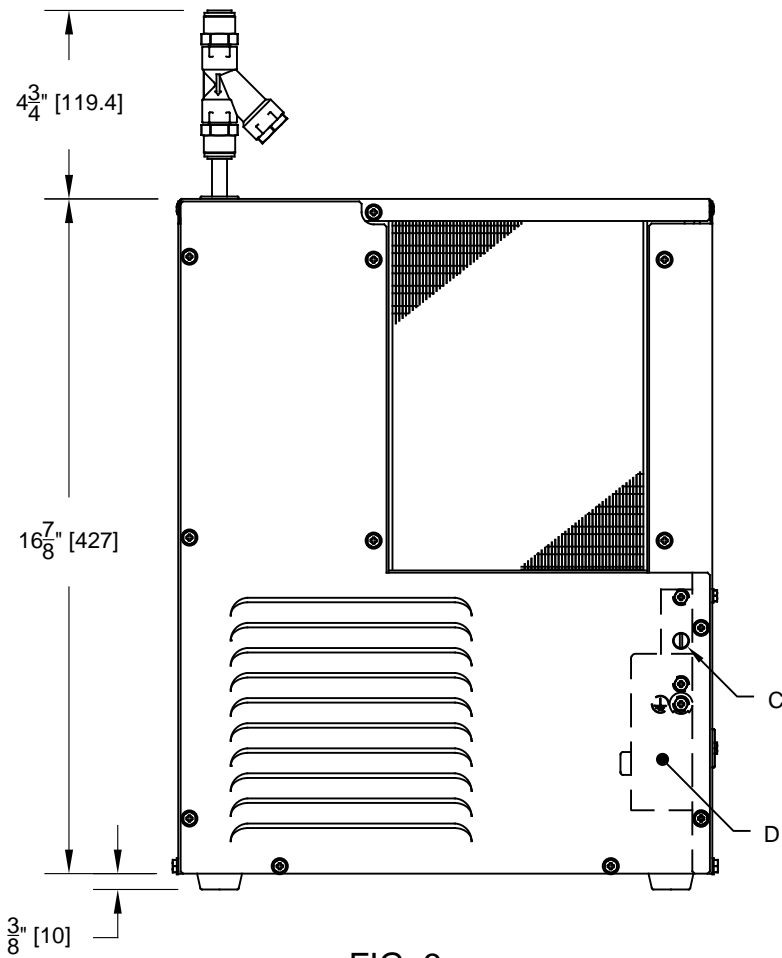


FIG. 3

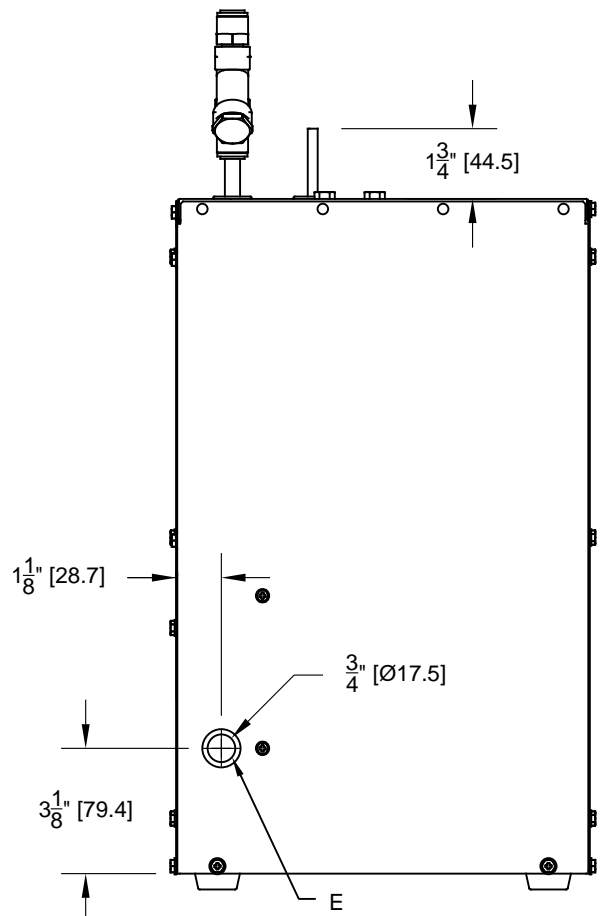


FIG. 4

		1455 KLEPPE LANE SPARKS, NEVADA 89431 (775) 359-4712 FAX (775) 359-7424 E-MAIL: HAWS@HAWS.CO.COM WEBSITE: WWW.HAWS.CO.COM		
		ECN NO. 5099 DRAWN HJM APPROVED JL	REVISED PER ECN: 6401 DATE 05/05/16 DATE 02/05/19	BY DHP CHKD DHP
SCALE: NA		DRAWING TYPE: INSTALLATION		SIZE: A SHEET 1 OF 2

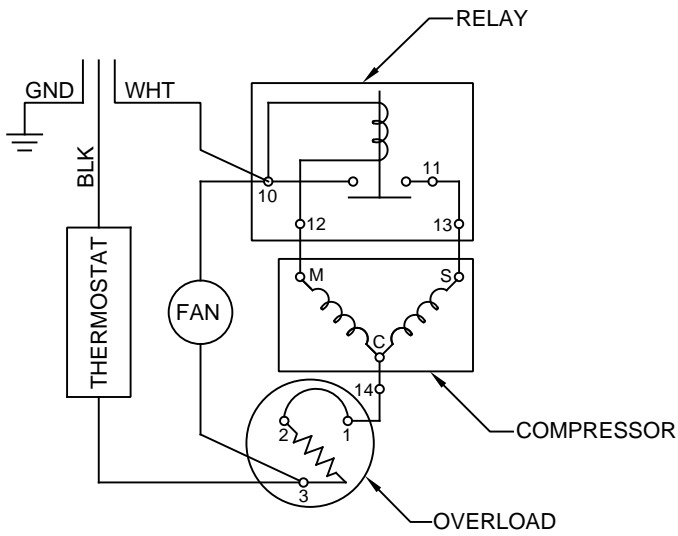


FIG. 5  
WIRING DIAGRAM

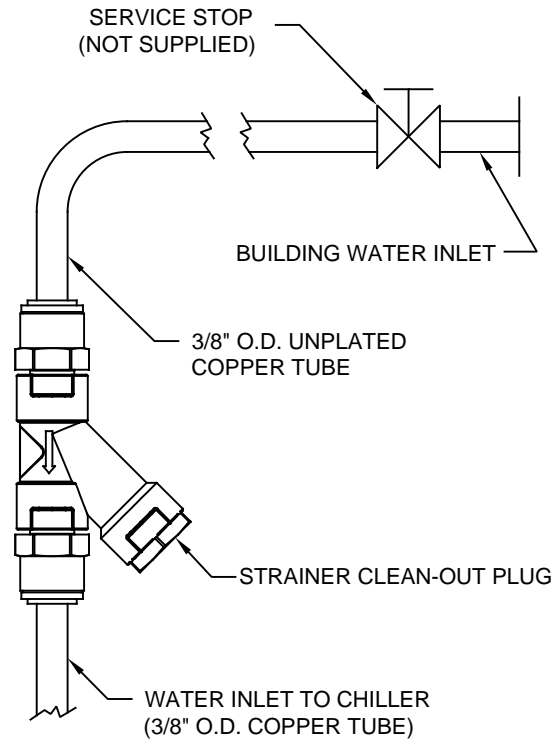


FIG. 6  
WATER CONNECTION DIAGRAM

		<b>Haws</b> <sup>®</sup>		1455 KLEPPE LANE SPARKS, NEVADA 89431 (775) 359-4712 FAX (775) 359-7424 E-MAIL: HAWS@HAWS.CO.COM WEBSITE: WWW.HAWS.CO.COM	
				ECN NO. 5099 DRAWN HM APPROVED JL	REVISED PER ECN: 5401 DATE 05/05/16 DATE 02/05/19
SCALE: NA		DRAWING TYPE: INSTALLATION		SIZE: A SHEET 2 OF 2	