Heat Transfer Systems

December 17, 2013

Project:	GSU Humanities
Contractor:	Gainesville Mechanical
Engineer:	Stevens & Wilkinson
Products:	EVAPCO Cooling Tower HTS Tower Accessories
Specification:	23 6513
Supplier:	Heat Transfer Systems 333 North Main Street Alpharetta, GA 30009 (770) 475-7740

Georgia Office
333 North Main Street
Alpharetta, Georgia 30009
770-475-7740

Florida Office
P. O. Box 15339
Fernandina Beach, Florida 32035
904-310-9280

TOLL FREE 877-475-7740
eFAX 877.649.0035
www.coolingtower.net

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EVAPCO, INC.
P.O. Box 1300
Westminster, Maryland 21158, USA

Telephone (410) 756-2600
FAX (410) 756-6450

December 13, 2013

Mr. Jeff Lineberry
Gainesville Mechanical, Inc.
2519 Monroe Drive
Gainesville, GA 30507

RE: Your Purchase Order
EVAPCO Serial 13-658326-658327
(2) UT-112-112 Cooling Towers
PROJECT GSU - Humanities

Dear Mr. Lineberry:

Please find enclosed certified presubmittal data for the above referenced order. We have included a listing of items in the submittal package for your convenience.

If we may be of further assistance please contact your local EVAPCO representative, Heat Transfer Systems, Inc. (HVAC).

We thank you for your interest in EVAPCO and look forward to being of service to you.

Sincerely,

EVAPCO, INC.

Alex Eisold

Alex Eisold
Marketing Engineer

ENCLOSURE(S)
cc: Heat Transfer Systems, Inc. (HVAC) - Dan Kelly
Hoffman & Hoffman, Inc.

December 16, 2013

EVAPCO® SUBMITTAL PACKAGE

PROJECT GSU - HUMANITIES UNIT (2) UT-112-112 COOLING TOWERS

CUSTOMER GAINESVILLE MECHANICAL, INC. P.O.

EVAPCO SERIAL NO. 13-658326-658327 ENGINEER STEVENS & WILKINSON

SUBMITTAL DATA ENCLOSED

DESCRIPTION	DOCUMENT NUMBER
PERFORMANCE AND MECHANICAL SPECIFICATIONS	AT12ST-ST
UNIT CERTIFIED DRAWING	T3121224-DRC-028
STEEL SUPPORT CONFIGURATION	SLIX1212DB
EXTERNAL SERVICE PLATFORM	PLT3MT12-DB-03
VIBRATION SWITCH (SINGLE SPEED)	V1AU0000-EE
CERTIFICATE OF COMPLIANCE	IBCIDCOC001.pdf
GUARANTEE OF THERMAL PERFORMANCE	AOS2636

EVAPCO…TAKING QUALITY AND SERVICE TO A HIGHER LEVEL!

Date 12/13/2013

PERFORMANCE AND MECHANICAL SPECIFICATIONS

EVAPCO® COOLING TOWERS

PROJECT	GSU - Humanities		
CUSTOMER	Gainesville Mechanical, Inc.		
ENGINEER	Stevens & Wilkinson		
UNIT:	(2) UT-112-112 Cooling Towers		
CUSTOMER P.O.		**EVAPCO SERIAL NO.**	13-658326-658327
CAPACITY	Each Unit 1000.3 GPM	96.2 °F IN	85 °F OUT 78 °F E.W.B.
FAN MOTOR:	Each Unit (1) 20 HP	**ELEC. SPEC.**	460/3/60
INLET PRESSURE:	2.4 PSIG	**DRIVES SIZED FOR 0" ESP.**	

UNIT TYPE	**Factory assembled, induced draft, counterflow cooling tower.**
CONSTRUCTION	**All cold water basin components including vertical supports and air inlet louver frames are constructed of type 304 Stainless Steel. Casing, channels and angle supports are constructed of heavy gauge mill hot-dip galvanized steel. All galvanized steel is coated with a minimum of 2.35 ounces of zinc per square foot of area (G-235 designation). During fabrication, all galvanized steel panel edges are coated with a 95% pure zinc-rich compound.**
IBC COMPLIANCE	**The unit structure has been designed, analyzed, and constructed in accordance with the latest edition of International Building Code (IBC) Regulations for seismic loads up to 1g and wind loads up to 60psf.**
MAKE UP FLOAT VALVE ASSEMBLY*	**Brass float valve with adjustable plastic float.**
PAN STRAINER*	**All type 304 stainless steel construction with large area removable perforated screens.**
ACCESS	**Hinge mounted door in the upper casing for fan drive and water distribution system access. Removable louver panels on all four sides of the unit for pan and sump access.**
FAN SHAFT	**Solid shaft of ground and polished steel. Exposed surface coated with rust preventative.**
FAN SHAFT BEARINGS	**Heavy-duty, self-aligning ball type bearings with extended lubrication lines to grease fittings located on access door frame. Bearings are designed for a minimum L-10 life of 75,000 hours.**

FAN MOTOR	**Totally enclosed, ball bearing type electric motor(s) suitable for moist air service. Motor(s) are Premium Efficient, Class F insulated, 1.15 service factor design. Inverter rated per NEMA MG1 Part 31.4.4.2 and suitable for variable torque applications and constant torque speed range with properly sized and adjusted variable frequency drives.**
FAN DRIVE	**The fan drive is a multi-groove, solid back, reinforced neoprene V-belt type with taper lock sheaves designed for 150% of the motor nameplate horsepower. Fan and motor sheaves are constructed of aluminum alloy.**
FILL	**Polyvinyl Chloride (PVC) of cross-fluted design. PVC sheets are bonded together for strength and durability. Fill is self-extinguishing for fire resistance, has a flame spread of 5 under A.S.T.M. designation E-84-81a, and is resistant to rot, decay and biological attack.**
WATER DISTRIBUTION SYSTEM	**Precision molded ABS, large orifice spray nozzles utilizing fluidic technology for superior water distribution over the fill media and to minimize water distribution system maintenance. Spray header and branches are Schedule 40 Polyvinyl Chloride (PVC) for corrosion resistance with steel connection to attach external piping. Branches have threaded end caps to facilitate debris removal.**
ELIMINATORS	**The eliminators are constructed entirely of Polyvinyl Chloride (PVC) in easily handled sections. Design incorporates three changes in air direction and limits the water carryover to a maximum of 0.001% of the circulating water rate.**
AIR INLET LOUVERS	**The air inlet louvers are constructed from UV inhibited polyvinyl chloride (PVC) and incorporate a framed interlocking design that allows for easy removal of louvers for access to the entire basin area for maintenance. The louvers have a minimum of two changes in air direction and are of a non-planar design to prevent splash-out, block direct sunlight and debris from entering the basin. (Patent Pending)**
SUPER LOW SOUND AXIAL PROPELLER FAN(S)	**Unit is provided with SUPER Low Sound Fan(s). Fans are high efficiency axial propeller type with non-corrosive FRP hub and blade construction. The one-piece molded heavy duty fan construction utilizes a forward swept blade design for superior sound quality. Each fan is statically balanced and installed in a closely fitted cowl with venturi air inlet for maximum fan efficiency. The fan cowl is covered with a heavy gauge hot dip galvanized steel fan guard.**
PASSIVATION	**All evaporative cooling equipment utilizing galvanized construction requires initial passivation to maximize the service life of the equipment. The sites water treatment vendor should be contacted several weeks prior to adding any water to the system to provide a passivation plan along with associated passivation plan costs.**
***OMITTED ON UNITS FOR REMOTE SUMP OPERATION**	

SPECIAL REMARKS:

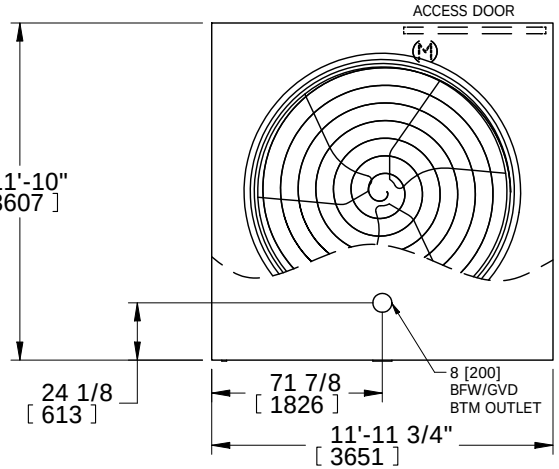
- **Bottom Suction Connection(s).**
- **Unit(s) provided with External Service Platform(s) with Vertical Ladder(s).**
- **3 ft extension(s) provided with ladder(s). (Note: If extension(s) are over 3 feet, they are to be externally supported by others.)**
- **SUPER Low Sound Axial Propeller Fan(s).**
- **Unit provided with vibration cutout switch(es), mounted (wiring and sensitivity adjustment by others).**
- **IBC Compliant up to 1g.**
- **(1) 3 in Hole(s) for BH (by others).**
- **(1) 3 in Hole(s) for LWCO (by others).**

EVAPCO, INC.

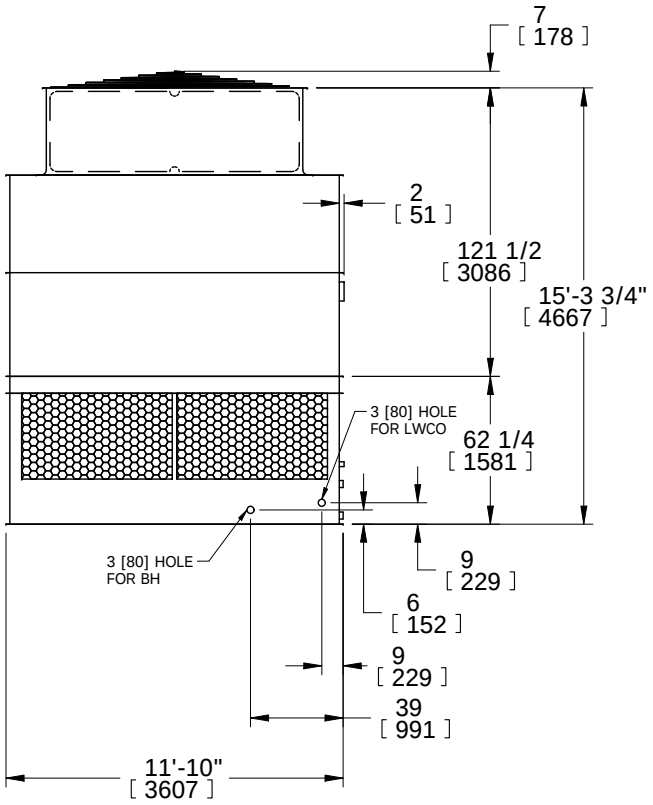
UNIT	MODEL #	SCALE	DWG. #	REV.	DATE	SERIAL #
COOLING TOWER	UT-112-112	N.T.S.	T3121224-DRC-028	-	12/13/13	13-658326-658327

NOTES:
1. (M)- FAN MOTOR LOCATION
2. HEAVIEST SECTION IS UPPER SECTION
3. MPT DENOTES MALE PIPE THREAD
   FPT DENOTES FEMALE PIPE THREAD
   BFW DENOTES BEVELED FOR WELDING
4. +UNIT WEIGHT DOES NOT INCLUDE
   ACCESSORIES (SEE ACCESSORY DRAWINGS)
5. MAKE-UP WATER PRESSURE
   20 psi MIN [137 kPa], 50 psi MAX [344 kPa]

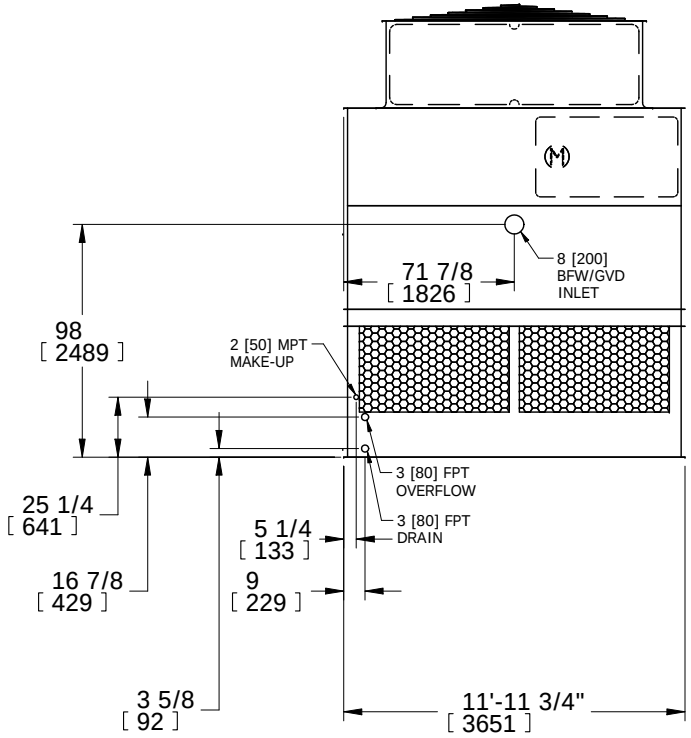
FACE 2
PLAN VIEW



FACE 1



FACE 2

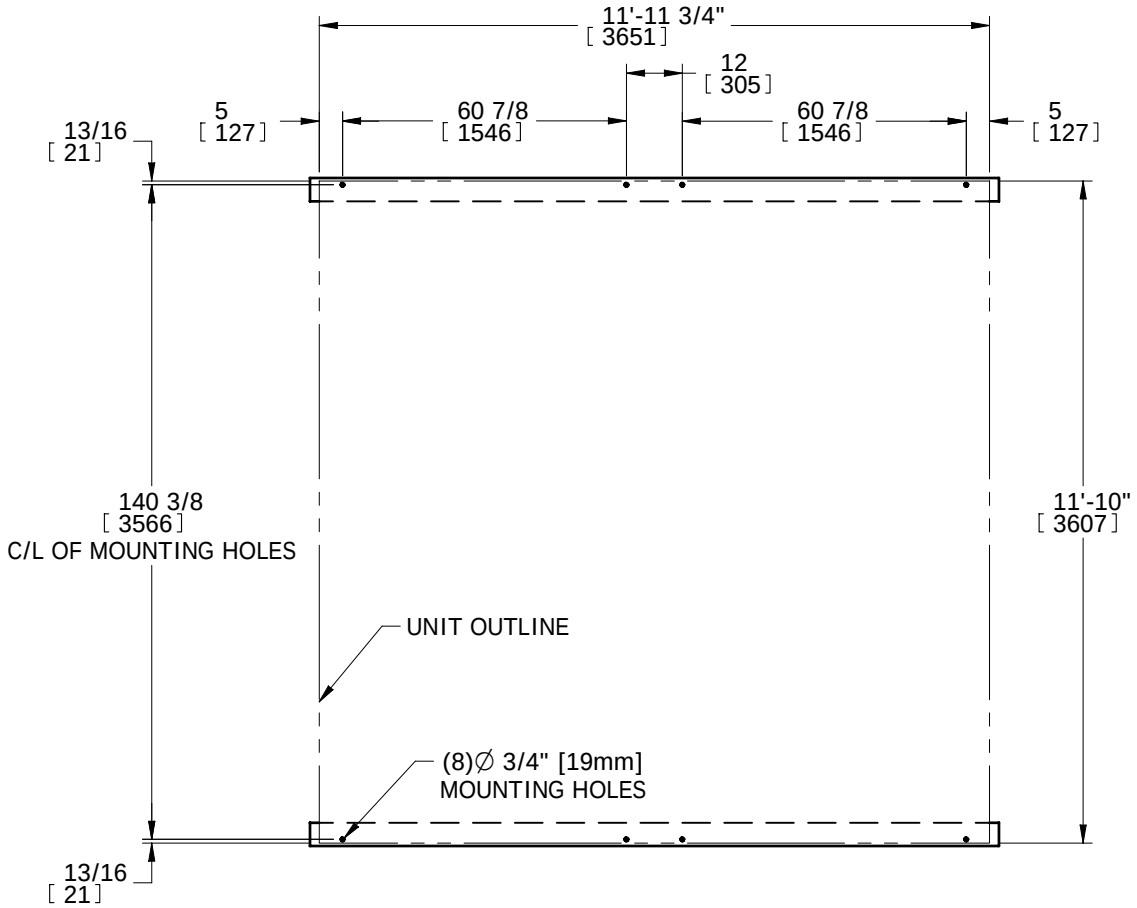


FACE 1

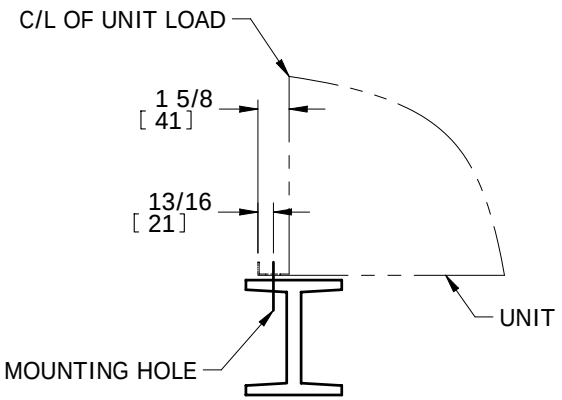
SHIPPING WEIGHT	8340 lbs+ [3783] kg+	OPERATING WEIGHT	14550 lbs+ [6600] kg+	HEAVIEST SECTION WEIGHT	5900 lbs+ [2676] kg+	NO. OF SHIPPING SECTIONS	2

EVAPCO, INC.

TITLE	UNIT:	DWG. #
STEEL SUPPORT CONFIGURATION	12x12 INDUCED DRAFT TOWERS	SLIX1212-DB



PLAN VIEW



TYPICAL END VIEW

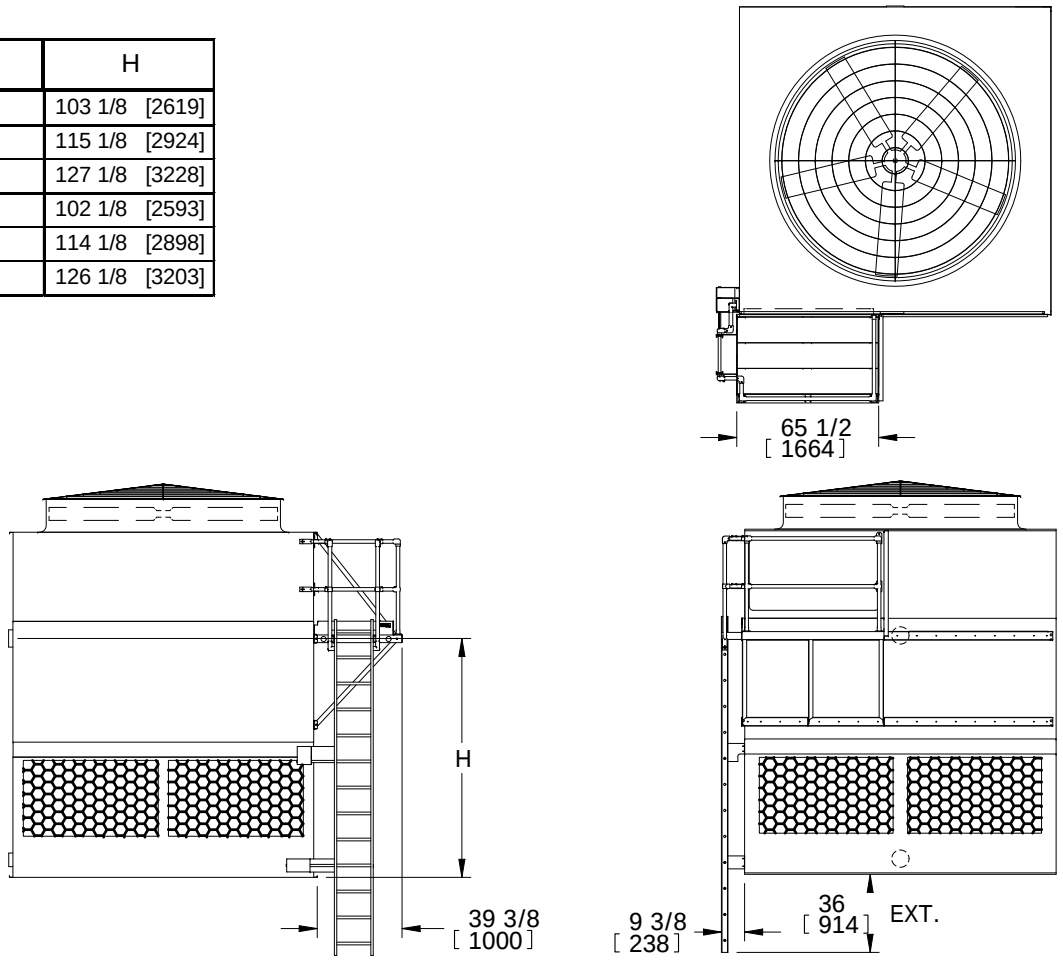
NOTES:

1. BEAMS SHOULD BE SIZED IN ACCORDANCE WITH ACCEPTED STRUCTURAL PRACTICES. MAXIMUM DEFLECTION OF BEAM UNDER UNIT TO BE 1/360 OF UNIT LENGTH NOT TO EXCEED 1/2" [13mm].
2. DEFLECTION MAY BE CALCULATED BY USING 55% OF THE OPERATING WEIGHT AS A UNIFORM LOAD ON EACH BEAM. SEE CERTIFIED PRINT FOR OPERATING WEIGHT.
3. SUPPORT BEAMS AND ANCHOR HARDWARE ARE TO BE FURNISHED BY OTHERS. ANCHOR HARDWARE TO BE ASTM - A325 5/8" [16mm] BOLT OR EQUIVALENT.
4. BEAMS MUST BE LOCATED UNDER THE FULL LENGTH OF THE PAN SECTION.
5. SUPPORTING BEAM SURFACE MUST BE LEVEL. DO NOT LEVEL THE UNIT BY PLACING SHIMS BETWEEN THE UNIT MOUNTING FLANGE AND THE SUPPORTING BEAM.
6. ANCHORING ARRANGEMENT SHOWN HAS A MAXIMUM WIND RATING OF 60 PSF [2.87 KPa] ON CASED VERTICAL SURFACES.
7. THE FACTORY RECOMMENDED STEEL SUPPORT CONFIGURATION IS SHOWN. CONSULT THE FACTORY FOR ALTERNATE SUPPORT CONFIGURATIONS.
8. UNIT SHOULD BE POSITIONED ON STEEL SUCH THAT THE ANCHORING HARDWARE FULLY PENETRATES THE BEAM'S FLANGE AND CLEARS THE BEAM'S WEB.

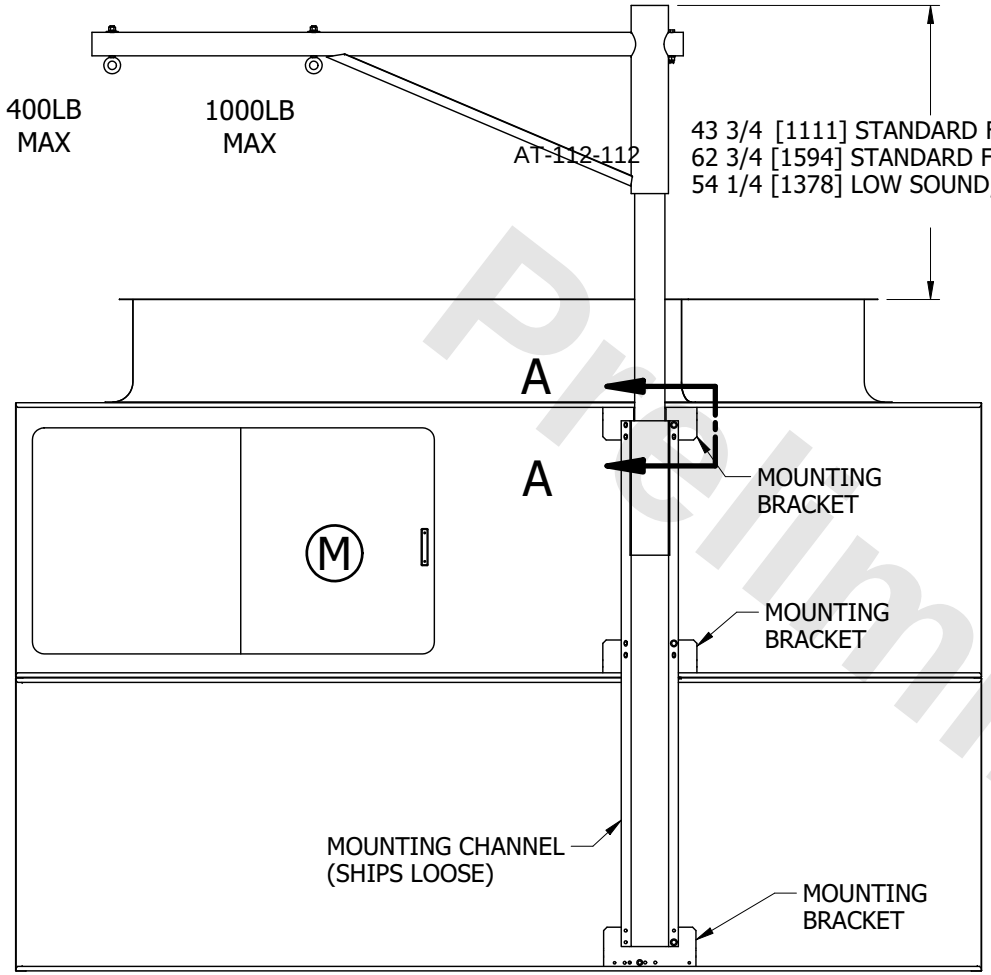
EVAPCO, INC.

TITLE	UNIT:	DWG. #
EXTERNAL SERVICE PLATFORM	ALL 12/3M X 12 AT COOLING TOWER UNITS	PLT3MT12-DB-03

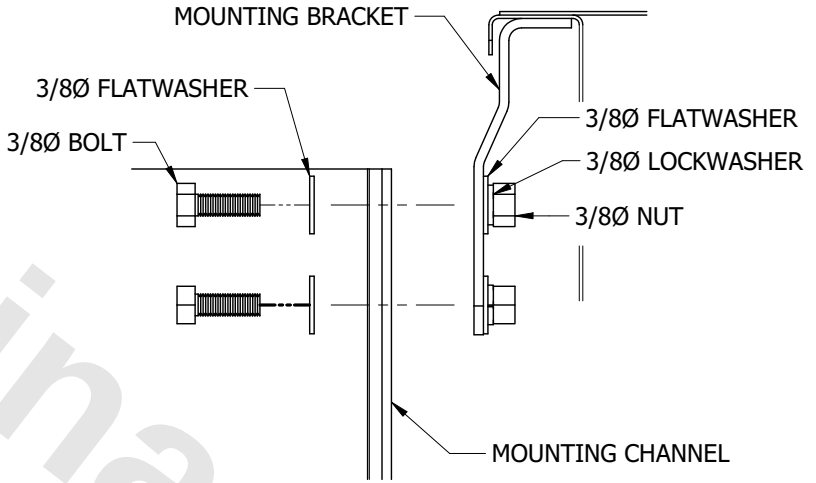
MODEL #	H
AT-112-012, 112, 212, 412	103 1/8 [2619]
AT-112-312, 612, 712	115 1/8 [2924]
AT-112-512, 812, 912	127 1/8 [3228]
AT-110-212, 412	102 1/8 [2593]
AT-110-112, 312, 512, 712	114 1/8 [2898]
AT-110-612, 812, 912	126 1/8 [3203]



NOTES:
1. LADDER AND PLATFORM SHIP LOOSE. FIELD INSTALLATION BY OTHERS IS REQUIRED.
2. THE BOTTOM OF THE LADDER DOES NOT EXTEND PAST THE BASE OF THE UNIT. IF THE UNIT IS ELEVATED THEN AN OPTIONAL EXTENDED LADDER PACKAGE SHOULD BE CONSIDERED. (CONSULT FACTORY)
3. REFER TO RIGGING PACK FOR LADDER AND PLATFORM MOUNTING INSTRUCTIONS.
4. EACH PLATFORM AND LADDER ASSY. WEIGHS 560 LBS. [254KG]



12 X 12/14/18/20 AT2, ATC/W-B, ESWA, REP



SECTION A-A

ASSEMBLY ARRANGEMENT
(TYPICAL)

NOTES:

A. (M)= MOTOR

B. DAVIT IS DESIGNED FOR RAISING OR LOWERING EVAPCO FAN MOTORS OR FANS AND GEARS AS UNIT IS EQUIPPED. DO NOT USE FOR ANY OTHER PURPOSE.

C. DAVIT IS DESIGNED TO PIVOT FREELY AND CAN BE REMOVED FROM ITS MOUNTING BASE FOR STORAGE.

D. DIMENSIONS LISTED AS FOLLOWS: ENGLISH [METRIC]
IN [mm]

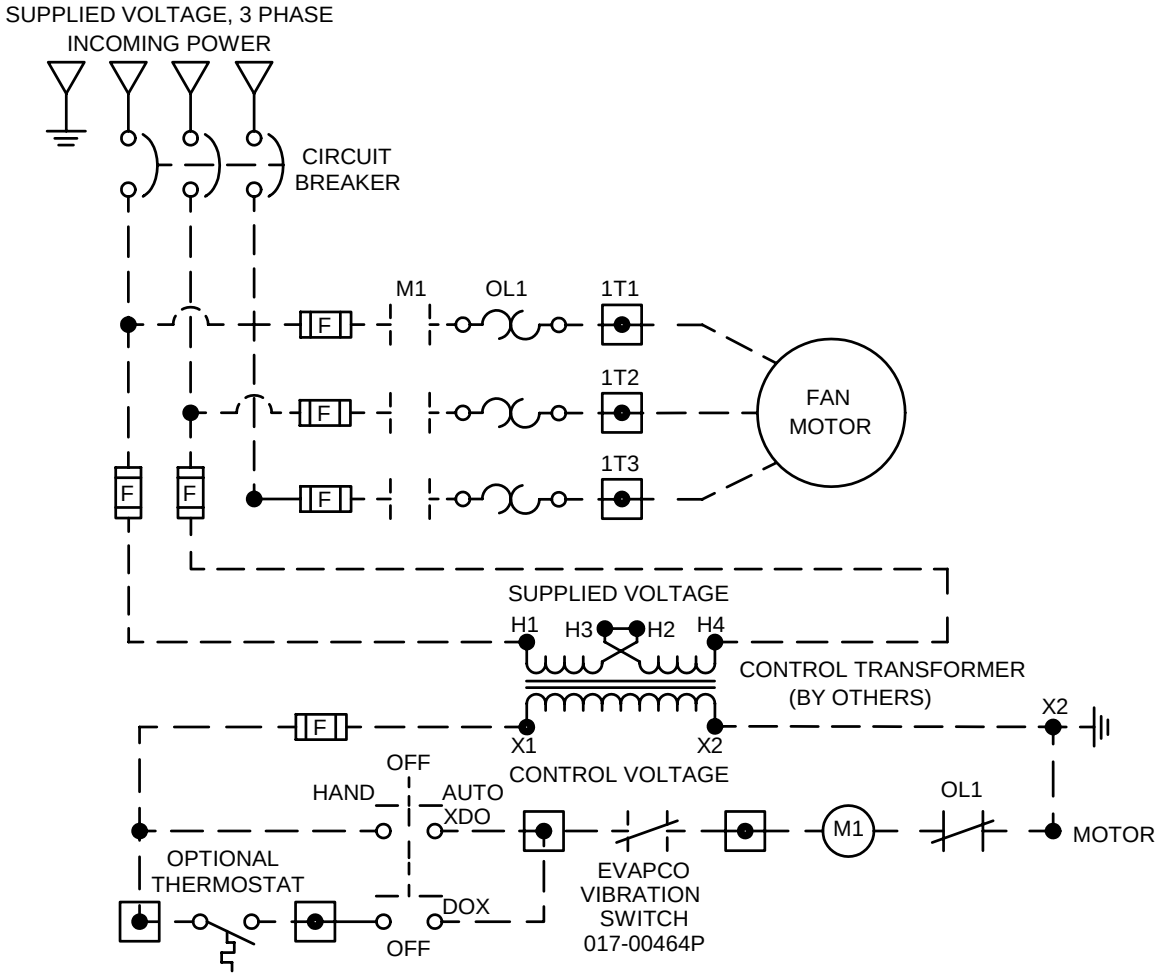
evapco

REMOVABLE DAVIT

MDAITTVW-DD

EVAPCO, INC.

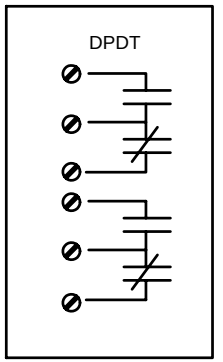
TITLE	DESCRIPTION:	DWG. #
VIBRATION SWITCH	SINGLE SPEED	V1AU0000-EE



SWITCH CONTACT RATING:

15 AMPS, 125, OR 480 Vac; 1/8 HP, 125 Vac; 1/4 HP, 250 Vac; 1/2 AMP, 125 Vdc; 1/4 AMP, 250 Vdc.

WIRING DIAGRAM:



NOTES:

1. DASHED LINES INDICATE WIRING(BY OTHERS)

ADJUSTMENT

ADJUST THE SWITCH SO THAT DURING FULL SPEED START-UP AND UNDER NORMAL CONDITIONS, THE CONTACTS DO NOT TRIP. FIRST, WITH THE MOTOR OFF, TURN THE ADJUSTMENT SCREW COUNTER-CLOCKWISE (MORE SENSITIVE DIRECTION) UNTIL THE SWITCH TRIPS. NEXT, TURN THE ADJUSTMENT SCREW CLOCKWISE 1/8 TURN (LESS SENSITIVE DIRECTION). RESET THE SWITCH BY DEPRESSING THE PUSH-BUTTON RESET LOCATED ON TOP OF THE SWITCH. START THE MOTOR ON FULL SPEED. IF THE MOTOR TRIPS THE SWITCH, THEN TURN THE ADJUSTMENT SCREW CLOCKWISE AN ADDITIONAL 1/8 TURN. RESET THE SWITCH AND START THE MOTOR AGAIN. REPEAT THE ABOVE PROCEDURE UNTIL THE MOTOR CONTINUES TO RUN.

Certificate of Compliance

AT, USS, UAT, UT Cooling Towers
eco-ATWB/WB-E, ATWB and ESWA Closed Circuit Coolers
eco-ATC, ATC-E Evaporative Condensers

Are certified to meet or exceed the Seismic and Wind Load Provisions set forth in the applicable building codes for this project.

These products have been manufactured following all applicable quality assurance programs.

Applicable Building Codes:
IBC 2012
ASCE-7
NFPA 5000

Referenced Report:
VMA-43387

Approval Agency:
VMC Seismic Consulting Group

THE VMC GROUP
The Power of Together

EVAPCO...Specialists in Heat Transfer Products and Services.

ID IBC COC 001

Guarantee of Thermal Performance

EVAPCO® unequivocally guarantees the thermal performance of its equipment as shown on the certified drawings, when the equipment is installed in accordance with good engineering practice. If after installation and start-up there is any question regarding thermal performance of the equipment, at the owner's request EVAPCO will send its engineers to the jobsite to conduct a performance test. This test may be observed by the owner and the consulting engineer or by their authorized representatives. If the results of the evaluation show the equipment to be deficient, EVAPCO will make the necessary repairs or alterations to correct the deficiency at no cost to the owner. If the equipment is found to be performing in accordance with its certified drawing, the owner is expected to reimburse the company for its costs associated with this performance test. This guarantee is subject to all conditions and limitations set forth in the express warranty that applies to the equipment.

EVAPCO...Specialists in Heat Transfer Products and Services.

Heat Transfer Systems

Heater Package

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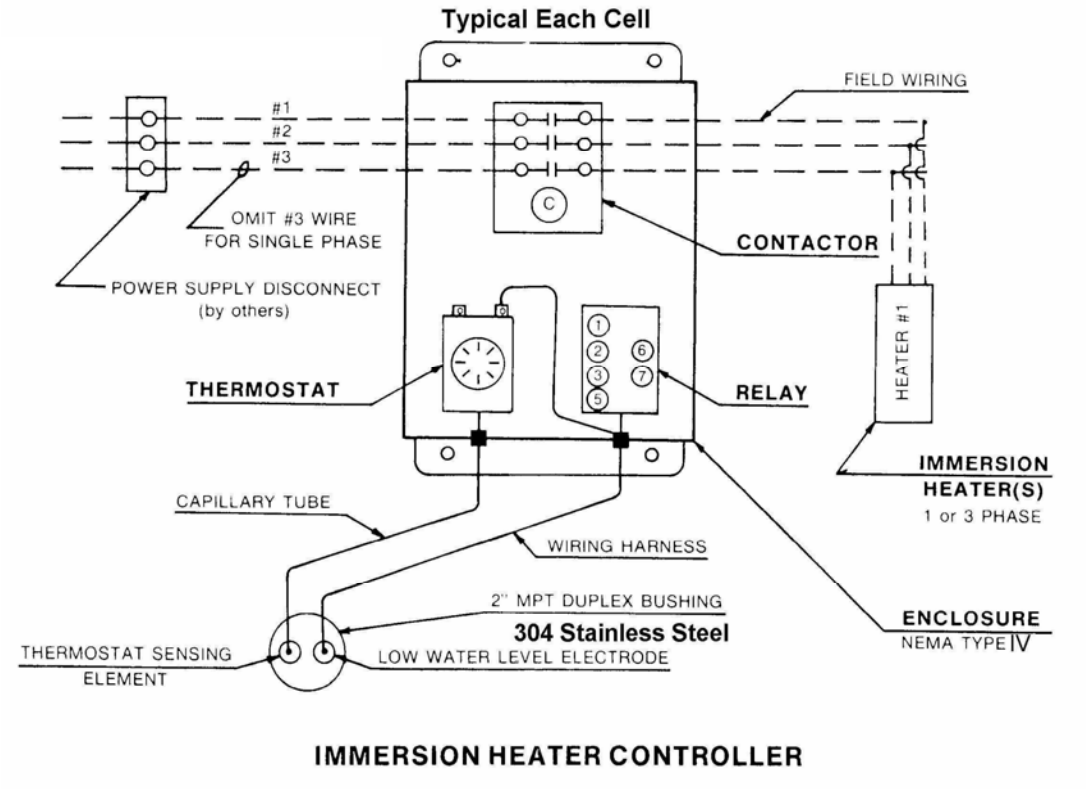
Project: GSU Humanities
Location: Atlanta, GA
Mechanical: Gainesville Mechanical
Engineer: Stevens & Wilkinson

Heater Controller Model Number: HTS 480603 **Quantity:** 1
Contactor Amp Rating: 40
Electric Immersion Heater **Quantity:** 1
Manufacturer: INDEECO **KW:** (1) 12 kW Stainless Steel Element
Voltage: 208 V **Phase:** 3 Ph **Frequency:** 60 Hz

Heater(s) sized to maintain +40 basin temperature at 0 degree ambient conditions



IMMERSION HEATER CONTROLLER