

CLEVELAND PUBLIC LIBRARY

Board Meeting

May 16, 2013

**RESOLUTION AUTHORIZING CHANGE ORDERS FOR THE HEAT
CONVERSION CONSTRUCTION PROJECT AT THE MAIN LIBRARY**

WHEREAS, On November 15, 2012, the Board of Trustees of the Cleveland Public Library (the "Board") awarded contracts for the Heat Conversion Construction Project to Marlin Mechanical LLC for mechanical work in the amount of \$639,455.92, and to Siemens Industry Inc. for temperature controls work in the amount of \$481,000, for conversion of the existing electrical heating system to a steam heating system at the Main Library building; and

WHEREAS, On March 21, 2013, the Board approved three (3) change orders to the contract with Marlin Mechanical LLC for the installation of gas boilers and electric humidification, for a net increase in the amount of \$137,463; and

WHEREAS, At the end of April of 2013, Marlin incurred unforeseen overtime expenses in the amount of \$2,643.21 during removal of a pipe, when the isolation valves in the chilled water line failed to hold, requiring Marlin to drain all the water from the chilled water line before it could remove the pipe, thus requiring several hours of "half time" work beyond regular work hours; and

WHEREAS, In addition, the Consultant Spectrum Energy Concepts, Inc. has recommended that in connection with the air handling systems, the Library install a reverse osmosis system which will demineralize the water and result in fewer maintenance issues in the future. If the system is installed, the life expectancy of the humidification system is expected to be extended past 20 years, and will operate more efficiently and use less energy to create the steam for the humidification load. The cost of installing two reverse osmosis systems is \$21,688.00; and

WHEREAS, In order to modify the contract with Marlin to accommodate these additional costs, the Library Administration recommends that the Board of Library Trustees approve the change orders attached to this Resolution and set forth below; and

EXHIBIT 7

WHEREAS, The Board of Library Trustees can in its discretion, approve written change orders and subsequently amend the contract sum; and

WHEREAS, Spectrum Energy Concepts Inc. has reviewed the necessity of the following, and has prepared and recommends acceptance of the change orders as detailed in the attached;

Contractor	Change	Amount
Marlin Mechanical	CO-M004 Add for half time extra cost incurred due to existing building valves leaking.	+\$ 2,643.21
	CO-M005 Add for Reverse Osmosis system for humidification units.	+\$21,688.00
	Net total increase	\$ 24,331.21
	TOTAL CONTRACT AMOUNT:	\$801,250.13

Now therefore be it

RESOLVED, That the above listed change orders are hereby approved with a \$24,331.21 increase to the Marlin Mechanical LLC contract being charged to the Building & Repair Fund Account 40190105-55300-12901.

**CHANGE
ORDER**

AIA DOCUMENT G701

OWNER
 PROJECT MANAGER
 CONTRACTOR
 FIELD
 OTHER

PROJECT: CLEVELAND PUBLIC LIBRARY 325 Superior Avenue Cleveland, Ohio 44114	CHANGE ORDER NUMBER: M-4 DATE: 4/26/2013 SPECTRUM PROJECT: Main Library Heat Conversion Project
TO CONTRACTOR: MARLIN MECHANICAL, LLC 1812 E. 47th Street Cleveland, Ohio 44103	CONTRACT DATE: CONTRACT FOR: Mechanical Work

The Contract is changed as follows: ADD for Hot Tap Welding in the hallway for Garage Heaters and for 12 Inch CHW/HW return interceptor. Chages are only for the "half time" extra cost incurred due to exiting building valves leaking.

APPROVED: _____
 Construction Management

Not valid until signed by the Owner, Architect and Contractor.

The original (Contract Sum) (Guaranteed maximum Price) was	<u>\$639,455.92</u>
Net change by previously authorized Change orders M1, M2, M3	<u>\$137,463.00</u>
The (Contract Sum) (Guaranteed maximum Price) prior to this Change order was	<u>\$776,918.92</u>
The (Contract Sum) (Guaranteed maximum price) will be (i increased by this Change Order in the amount of	\$2,643.21
The new (Contract Sum) (Guaranteed maximum Price) including this Change order will be	<u>\$779,562.13</u>

The Contract Time will be (increased) decreased) (unchanged) by No change
 The date of Substantial Completion as of the date of this Change Order therefore is

NOTE: This summary does not reflect changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive.

<u>Spectrum Energy Concepts, Inc.</u>	<u>Marlin Mechanical, LLC</u>	<u>CLEVELAND PUBLIC LIBRARY</u>
<u>Project Manager</u>	<u>CONTRACTOR</u>	<u>OWNER</u>
<u>3346 Arbor Way</u>	<u>1812 E. 47th Street</u>	<u>325 Superior Avenue</u>
<u>Address</u>	<u>Address</u>	<u>Address</u>
<u>Westlake, OH 44145</u>	<u>Cleveland, Ohio 44103</u>	<u>Cleveland, Ohio 44114</u>
<u>BY</u>	<u>BY</u>	<u>BY</u>
<u>DATE</u>	<u>DATE</u>	<u>DATE</u>

MARLIN MECHANICAL, llc.
1812 EAST 47TH STREET
CLEVELAND, OHIO 44103
PHONE (216) 881-5155 FAX (216) 881-2924

.....
MARLIN MECHANICAL LLC.

March 12th, 2013

Cleveland Public Library
325 Superior Ave
Cleveland, Ohio 44114

Attn: Project Team

Re: Main Library Energy Conservation Project – Electric Heat Conversion
Current Change Order(s)

To Whom It May Concern:

Marlin Mechanical respectfully submits the current status of work/services that were conducted outside of the contract terms and RFP scope of work.

To Date the following hours have been expensed by Marlin Mechanical outside of the normal work hour period used per the agreement terms.

- HOT TAP WELDING HOURS IN HALL WAY FOR GARAGE HEATING LOOP
 - Date of Service – 4/20/2013
 - Charges are for the half time only to conduct the welding in the hall way.
- 12 INCH MAIN CHW/HW RETURN INTERCEPTION
 - Date of Service – 4/22/2013
 - Charges are for the half time only to conduct the interception due to the facility loop not draining completely once Facility management allowed our forces to begin the interception.

Please see our work sheets that address the Change Order format.

These hours submitted were at the direction of facility personnel and or due to circumstances not accounted for within the estimated scope of work.

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MMLLC

CHANGE ORDER PRICING REVIEW

Date: 22-Apr-13

Project No.: 160812

Customer: CLEVELAND PUBLIC LIBRARY

County: Cuyahoga

Project: ENERGY CONSERVATION

Description:

Premium Time used to conduct Hot Tap welding direct
CPI due to Hallway activities.

Contractor: MARLIN MECHANICAL LLC

Premium Time used for 12 inch Interception

Constr. Mgr.: Tim Janos

(hours noted in worksheet are just the half time hours.

Architect: Design Build

TOTALS	Additional Fringes		
	Type	hours	x rate
\$835.14			
\$481.88	Training fund		0.88
	Annuity fund		1.75
	unemploy		0.4
\$286.72			
\$185.90			
\$35.75			
\$321.39			
\$108.32			
	Total	0	3.03

A. LABOR: (straight time only)

worker classification	pipefitters	23.25	x	35.92
worker classification	Foreman	12.5		38.55
			hours x rate =	

B. FRINGES: (on labor only, may include FICA etc.)

Health & Welfare	35.75	8.02
Pension	35.75	5.2
Vacation Fund	35.75	1
Taxes (FICA, SUTA)	35.75	8.99
Group Fringes (shown in table at right)	35.75	3.03

C. EQUIPMENT RENTALS (Heavy/specialized equipment)

	0	0
	hour,day,week	x rate =

D. OWNED EQUIPMENT (Specialty Tools/Torches/Equipment)

	0	hrs.	25
	hour,day,week	x rate =	

E. TRUCKING: (Delivery charge - Portal - Portal)

	0	hrs.	50
	hour,day,week	x rate =	

Subtotal (A,B,C,D,E): \$2,255.10

F. OVERHEAD: @ 10% (on items A,B,C,D & E =< 10%) \$225.51

G. MATERIALS 1 x 1 \$0.00
quantity x unit cost

Subtotal (A,B,C,D,E,F,G): \$2,480.60

H. PROFIT: @ 5.5% (on items A,B,C,D,E,F & G) \$136.43

Subtotal (A thru H): \$2,617.04

I. SUBCONTRACTOR \$ - \$0.00

J. SUBCONTRACTOR MARKUP 5% \$0.00

Subtotal (I and J): \$0.00

TOTAL COST (A thru H) + (I and J): \$2,617.04

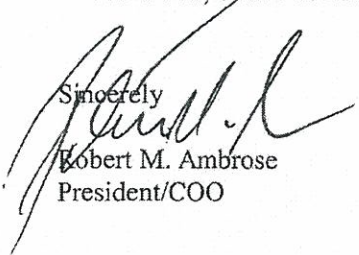
K. MISCELLANEOUS ITEMS (allowable @ cost only)

1. Bond extension Total Cost x 1%	\$26.17
2. *Premium portion of approved OT wages	\$0.00
3. Fees for permits, licenses, etc.	\$0.00
4. Portal to Portal Charges (not to exceed state travel guidelines)	\$0.00

TOTAL COST (A thru H) + (I and J) + (K): \$2,643.21

If there are concerns or questions, with our materials presented herein do not hesitate to contact me. I'm the President and COO of Marlin Mechanical LLC, my direct number is 440-773-3081, office at 216-881-5155, or robertambrose@marlinmech.com

Sincerely


Robert M. Ambrose
President/COO

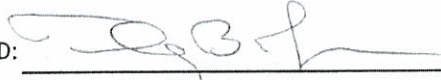
**CHANGE
ORDER**

OWNER
 PROJECT MANAGER
 CONTRACTOR
 FIELD
 OTHER

AIA DOCUMENT G701

PROJECT: CLEVELAND PUBLIC LIBRARY	CHANGE ORDER NUMBER: M-5
325 Superior Avenue	DATE: 5/8/2013
Cleveland, Ohio 44114	SPECTRUM PROJECT: Main Library Heat Conversion Project
TO CONTRACTOR: MARLIN MECHANICAL, LLC	CONTRACT DATE:
1812 E. 47th Street	CONTRACT FOR: Mechanical Work
Cleveland, Ohio 44103	

The Contract is changed as follows: ADD for REVERSE OSMOSIS SYSTEMS to extend lfe of humidification systems for AHU 1 and AHU 3 all per Marlin proposal dated 4/24/13 and attached hereto for reference.


APPROVED: 
 Construction Management

Not valid until signed by the Owner, Architect and Contractor.

The original (Contract Sum) (Guaranteed maximum Price) was	\$639,455.92
Net change by previously authorized Change orders M1, M2, M3	<u>\$140,106.21</u>
The (Contract Sum) (Guaranteed maximum Price) prior to this Change order was	<u>\$779,562.13</u>
The (Contract Sum) (Guaranteed maximum price) will be (i increased by this Change Order in the amount of	\$21,688.00
The new (Contract Sum) (Guaranteed maximum Price) including this Change order will be	<u>\$801,250.13</u>

The Contract Time will be (increased) decreased) (unchanged) by No change
 The date of Substantial Completion as of the date of this Change Order therefore is

NOTE: This summary does not reflect changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive.

<u>Spectrum Energy Concepts, Inc.</u>	<u>Marlin Mechanical, LLC</u>	<u>CLEVELAND PUBLIC LIBRARY</u>
Project Manager	CONTRACTOR	OWNER
<u>3346 Arbor Way</u>	<u>1812 E. 47th Street</u>	<u>325 Superior Avenue</u>
Address	Address	Address
<u>Westlake, OH 44145</u>	<u>Cleveland, Ohio 44103</u>	<u>Cleveland, Ohio 44114</u>
BY 	BY _____	BY _____
DATE <u>5/9/13</u>	DATE _____	DATE _____

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MARLIN MECHANICAL, llc.
1812 EAST 47TH STREET
CLEVELAND, OHIO 44103
PHONE (216) 881-5155 FAX (216) 881-2924

MARLIN MECHANICAL LLC.

April 24, 2013

Cleveland Public Library
325 Superior Ave
Cleveland, Ohio 44114

Attn: Project Team

Re: Main Library Energy Conservation Project – Electric Heat Conversion
Humidification RO System recommendation

To Whom It May Concern:

Marlin Mechanical respectfully submits a voluntary recommendation to Furnish and Install a dedicated Reverse Osmosis (RO) water treatment feed system for the new humidification units slated for AHU1 and AHU 3.

Our recommendation is based on discussions with both Tim Murdock, the Humidifier manufacturer(s) and based on the chronic issues CPL has experienced with similar humidification units. The RO system will minimize if not eliminate the fouling and calcification of the humidification unit and that of the distribution tubes.

The life expectancy of the humidification system will be extended well past 20 yrs if employed, the system will operate more efficiently and use less energy to create the steam for the humidification load.

The maintenance required for the humidification units will be reduced dramatically. (Please see the Manufacturer's write up on employing the RO system in conjunction with their system), and the potential replacement of the Main Humidification generator from water quality will be eliminated.

The pricing submitted herein is for both Air Handling systems.

Based on the prior Humidification load study, each humidifier will have its own reverse osmosis treatment system. The system will consist of an activated carbon filter and water softener that feeds the reverse osmosis unit. Each reverse osmosis unit is rated for 2535 gallons per day in optimal conditions. The reverse osmosis then fills the humidifier's storage tank. The RO will turn off when the humidifier signals its tank is full.

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The following equipment is intended with the reverse osmosis system:

- Two (2) simplex softener units, 7" diameter x 44" tall, with an automatic timer head.
- Two (2) 20" filter housing with an activated carbon filter cartridge.
- Two (2) RO units with the potential to produce 2535 gallons a day. It is rated for a max flow of 1.88 gallons per minute.

These units will be located and piped closed coupled to the Humidification stations that are basically in the same area as the prior stations.

A dedicated electrical service will be extended to each RO system and interlocks for each humidifier bank.

Pricing for Two RO systems (Furnish & Installation) to address the humidification needs for AHU1 and AHU3. **\$ 21,688.00**

Please see our work sheets that address the Change Order format that created the cost started above.

If there are concerns or questions, with our materials presented herein do not hesitate to contact me. I'm the President and COO of Marlin Mechanical LLC, my direct number is 440-773-3081, office at 216-881-5155, or robertambrose@marlinmech.com

Sincerely

Robert M. Ambrose
President/COO



PURE
Humidifier

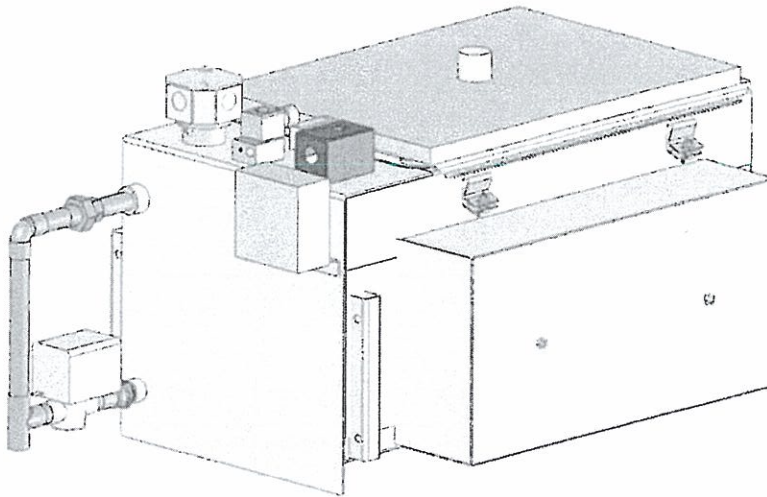
"Read and Save These Instructions"

Standard Water

"ES" Series Electric Humidifier

Installation Instructions

Operation and Maintenance Manual



ETL LISTED HUMIDIFIER

Our results are comforting

Form No: ESOM-12-12



Introduction

To the user of PURE Humidifier Co.'s Electric Humidifiers

We at PURE Humidifier Co. thank you for choosing one of our quality products. PURE Humidifier Co.'s "ES" Series humidifiers are models of simplicity to install, operate and maintain. However, they must be maintained to provide maximum operating efficiency.

PLEASE READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY. PROPER OPERATION AND HUMIDITY CONTROL IS POSSIBLE ONLY WITH PROPER INSTALLATION AND MAINTENANCE.

The "ES" Series Humidifier utilizes a Tri-Probe conductive type water control system, which is designed for use with standard (hard or soft) tap water. Use of demineralized, deionized or reverse osmosis water will cause a failure of the water level control system and void the warranty.

High chloride content in feed water can cause chloride stress cracking and chloride pitting in stainless components. Chloride stress corrosion cracking (CSCC) and chloride pitting of stainless steel components is not covered by warranty. Do not use hydrochloric acid descalers or bleach to clean the tank. Consult the factory if you are unsure about which chemical descaler to use.

PURE Humidifier Co.'s "ESDDR" Series should be installed on applications that require demineralized, deionized or reverse osmosis water.

To ensure proper installation of this product, it must be installed by qualified HVAC and electrical contractors, and must be in compliance with local, state, federal, and governing codes. If installed improperly this product may cause damage to property, severe personal injury, or death as a result of electric shock, burns, and/or fire.

Do not adjust any components inside humidifier control box without consulting the factory

For indoor installation only unless supplied with an outdoor enclosure.

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CAN NOT ADD THE R.O. SYSTEM LATER w/out REPLACING THE PROBES & SOME STANDARD HARDWARE! COSTLY LATER

The PURE Humidifier Co. Warranty

PURE Humidifier Co. guarantees its products to be free from defects in material and workmanship for a period of one year from the date of shipment; provided the product is properly installed, serviced, and put into the service for which it was intended.

PURE Humidifier Co. is obligated under the terms of this warranty to the repair or replacement of the defective part(s), excluding any labor charges, or to refund the purchase price at our option. PURE Humidifier Co. assumes no obligation for incidental or consequential damages. The above provisions are in lieu of all other guarantees, obligations, liabilities or warranties, expressed or implied.



Maintenance Instructions

PURE Humidifier Co. "ES" Maintenance Instructions

The "ES" Series Humidifier is designed to provide the best possible operation with minimum maintenance. However, the humidifier should be inspected and placed on a dedicated maintenance schedule to ensure continued operation of the humidifier and its accessories. **PURE Humidifier Co. recommends that the following items be inspected and/or cleaned on a minimum basis of twice a year.** If excessive mineral build-up occurs, the maintenance schedule should be increased.

<u>Inspect / Maintenance Item</u>	<u>Procedure to Follow</u>
Water Fill Valve	Check to make sure the fill valve is operating properly. If the valve appears to continually fill, check the valve seat and seal (see trouble shooting instructions).
Safety Interlocks (air flow, high-limit)	Check to make sure the safety interlocks (air flow, high-limit, etc.) will shut down the humidifier.
Immersion Heaters	Verify the correct amperage is being drawn by the Immersion heaters. Reference the wiring diagram for correct amperage.
Humidifier Cover / Tank	Inspect for any leaks. Repair as required. Remove the mineral deposits from floor of the humidifier reservoir. If excessive build-up is found, the cover may need to be removed to facilitate complete cleaning of the humidifier.
Tri-Probe	Remove Tri-Probe assembly from humidifier (set-screw and o-ring seal) and inspect for excessive mineral build-up. Inspect plastic housing for cracks. Probe ends should be cleaned and the probe assembly re-installed.
Drain Valve & Drain Piping	The drain valve seat and seal should be inspected and cleaned as required. The drain line and water seal should be inspected and cleaned to ensure free flow of the overflow and drain line.
Flexible Hose	Inspect for cracks or leaks. It is normal for the hose to become hard and develop a "set".



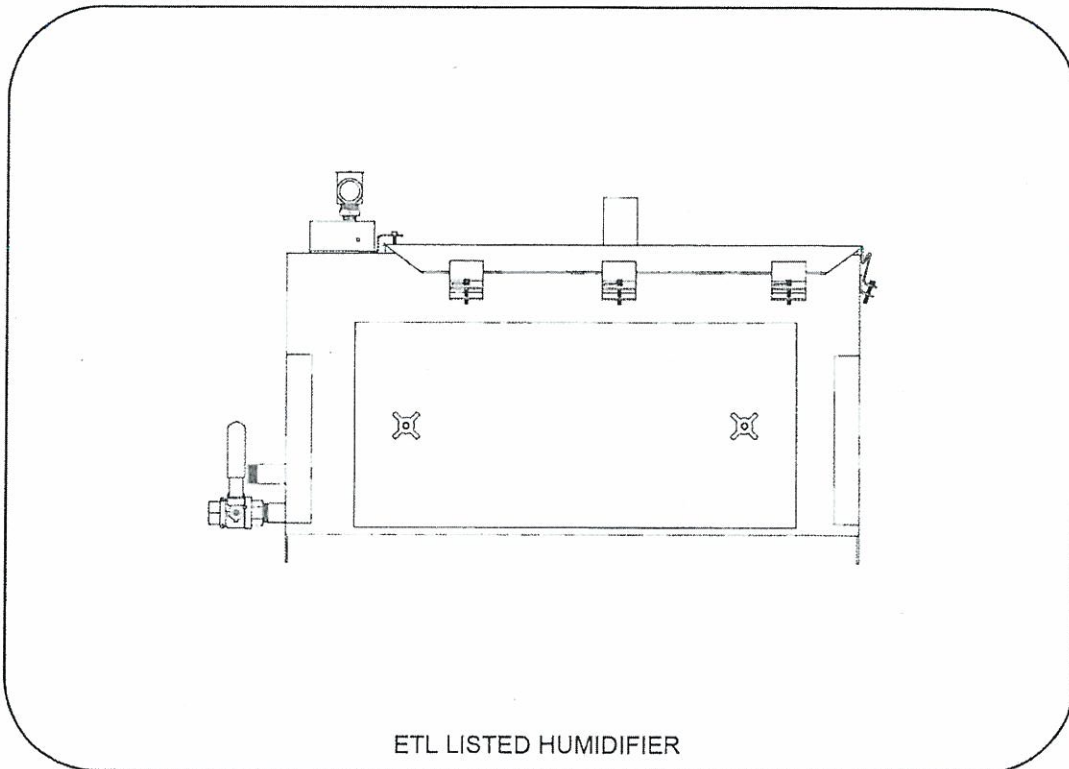
"Read and Save These Instructions"

Deionized, Demineralized, or Reverse Osmosis Water

"ESDDR" Series Electric Humidifier

Installation Instructions

Operation and Maintenance Manual



Our results are comforting

Form No: ESDOM-06-10



Introduction

To the user of PURE Humidifier Co.'s Electric Humidifiers

We at PURE Humidifier Co. thank you for choosing one of our quality products. PURE Humidifier Co.'s "ESDDR" Series humidifiers are models of simplicity to install, operate and maintain. However, they must be maintained to provide maximum operating efficiency.

PLEASE READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY. PROPER OPERATION AND HUMIDITY CONTROL IS POSSIBLE ONLY WITH PROPER INSTALLATION AND MAINTENANCE.

High chloride content in feed water can cause chloride stress cracking and chloride pitting in stainless components. Chloride stress corrosion cracking (CSCC) and chloride pitting of stainless steel components is not covered by warranty. Do not use hydrochloric acid descalers or bleach to clean the tank. Consult the factory if you are unsure about which chemical descaler to use.

The "ESDDR" Series Humidifier is designed to operate with deionized, demineralized, or reverse osmosis water. All components that will be in contact with the water are constructed of type 304 stainless steel, incoloy or corrosion resistant materials.

To ensure proper installation of this product, it must be installed by qualified HVAC and electrical contractors, and must be in compliance with local, state, federal, and governing codes. If installed improperly this product may cause damage to property, severe personal injury, or death as a result of electric shock, burns, and/or fire.

The PURE Humidifier Co. Warranty

PURE Humidifier Co. guarantees its products to be free from defects in material and workmanship for a period of one year from the date of shipment; provided the product is properly installed, serviced, and put into the service for which it was intended.

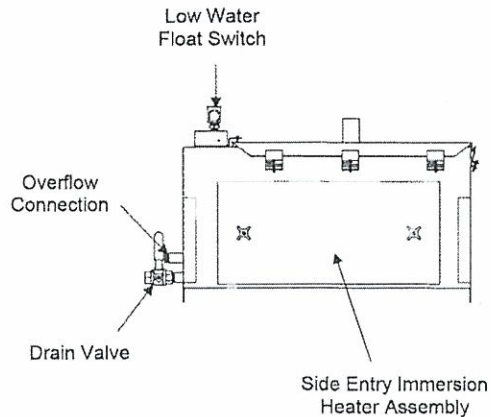
PURE Humidifier Co. is obligated under the terms of this warranty to the repair or replacement of the defective part(s), excluding any labor charges, or to refund the purchase price at our option. PURE Humidifier Co. assumes no obligation for incidental or consequential damages. The above provisions are in lieu of all other guarantees, obligations, liabilities or warranties, expressed or implied.

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Manufacturers for these types of systems!

External Features of the PURE Humidifier Co. "ESDDR" Series Electric Humidifier





Water Supply Piping

Water Supply Piping

This style humidifier utilizes a float operated fill valve system which is designed for use with deionized, demineralized, or reverse osmosis water. Use of mineralized tap water will cause fill valve failure and will void the humidifier warranty.

Cold or hot deionized, demineralized, or reverse osmosis water can be supplied to the humidifier. A minimum water pressure of 15 psi (1.03 Bar) should be maintained to provide the proper water level within the humidifier. If the water pressure is above 50 psi (3.5 Bar), water hammer could occur and a pressure reducing valve or shock arrester should be used. The humidifier has a factory built-in 1.5" (4 cm) air gap between the water inlet and the overflow. Local codes should be checked to see if the addition of the vacuum breaking device is required.

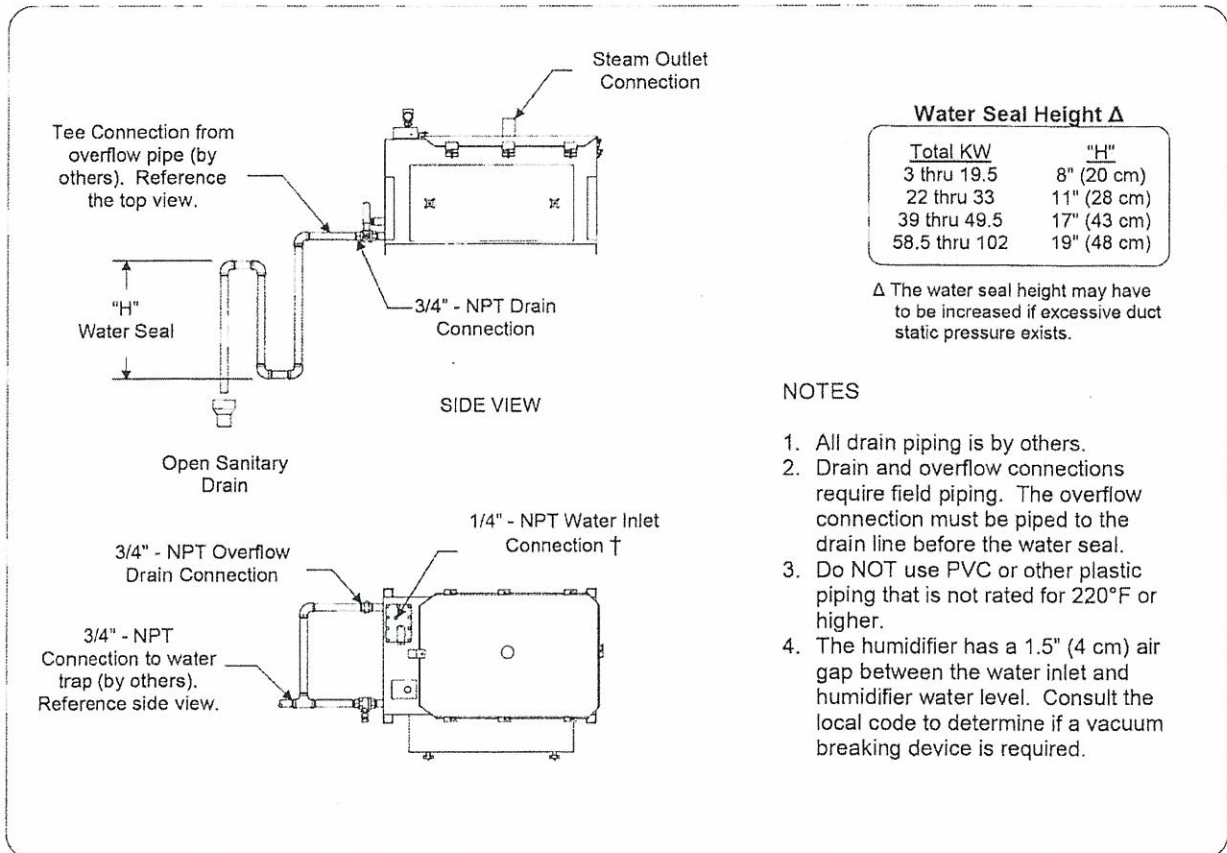
Drain Piping

The "ESDDR" style humidifier requires two drain piping connections; a drain and an overflow connection. The drain lines should be piped together before the water seal as shown in the drain piping illustration.

A water seal (as shown in the piping illustration) should be installed to prevent steam from escaping through the drain line. The water seal should be of sufficient height to overcome the pressure developed in the humidifier (reference water seal height table) and the duct static pressure.

The drain piping should be copper or stainless steel. The use of PVC piping is not recommended; the humidifier temperature may cause the PVC to soften and fail.

If gravity drain is not possible please use a condensate pump rated for 212°F water or contact a PURE Humidifier Co. representative to purchase one.





Maintenance Instructions

PURE Humidifier Co. "ESDDR" Maintenance Instructions

The "ESDDR" Series Humidifier is designed to provide the best possible operation with minimum maintenance. However, the humidifier should be inspected and placed on a dedicated maintenance schedule to ensure continued operation of the humidifier and its accessories. **PURE Humidifier Co. recommends that the following items be inspected and/or cleaned on a minimum basis of twice a year.** If excessive mineral build-up occurs, the maintenance schedule should be increased.

<u>Inspect / Maintenance Item</u>	<u>Procedure to Follow</u>
Water Make-up Float Valve	Check to make sure the fill valve is operating properly. If the valve appears to continually fill, check the valve seat and seal (see trouble shooting instructions).
Low Water Float Switch	Check to make sure the switch will shut the humidifier off when the water level drops too low. Open the drain valve to allow water to drain out for checking purposes. Make sure to reset the drain valve after inspection is completed.
Safety Interlocks (air flow, high-limit)	Check to make sure the safety interlocks (air flow, high-limit, etc.) will shut down the humidifier.
Immersion Heaters	Verify the correct amperage is being drawn by the heating element. Reference the wiring diagram for correct amperage.
Humidifier Cover / Tank	Inspect for any leaks. Repair as required. Remove the mineral deposits from floor of the humidifier reservoir. If excessive build-up is found, the cover may need to be removed to facilitate complete cleaning of the humidifier.
Flexible Hose	Inspect for cracks or leaks. It is normal for the hose to become hard and develop a "set".

Low Maintenance w/ R.O. SYSTEM -

Low Costly TO MAINTAIN!