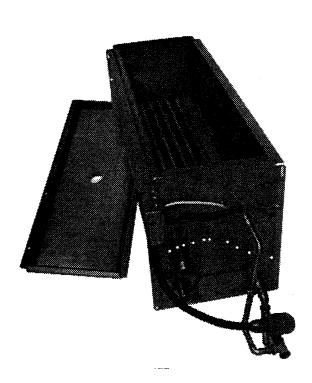
# HERRMIDISTEAM - SS

Steam- To - Steam Humidification for All Water Conditions

### INSTALLATION, OPERATION AND SERVICE MANUAL



Your Total Capability Humidification Resource Meeting Humidification Needs For Commercial & Industrial



A FEDOERS ENGINEERED PRODUCTS COMPANY

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### **Limited Warranty**

Seller warrants the equipment of its manufacturing to be free from defects in workmanship and material for a period of 24 months after shipment or if applicable 24 months after initial commissioning, whichever occurs first. This warranty is limited, however, to the repair or replacement of defective equipment that is returned, freight prepaid, to Seller's factory.

This limited warranty does not apply to any part or component that is damaged in transit or when handling, has been subject to misuse, negligence or accident, has not been installed, operated or serviced according to Seller's instructions, or has been operated beyond the factory-rated capacity or has been altered in any way.

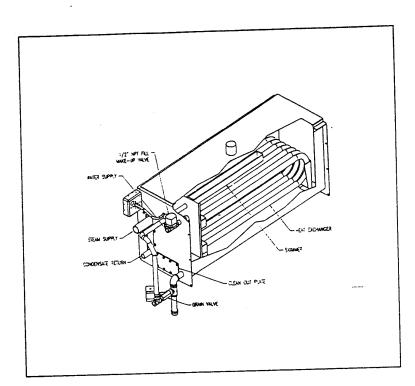
Seller's liability is limited to replacement of defective parts or components and does not include any cost of labor (including, but not limited to, labor required to remove and/or reinstall any defective part) other than Trion/Hermidifier factory labor.

Trion/Hermidifier shall not be responsible for loss of use of any product, loss of time, inconvenience, or damage to other equipment, or any other indirect or consequential damage with respect to property whether as a result of breach of warranty, neglect, or otherwise.

THE WARRANTIES AND LIABILITIES SET FORTH ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.

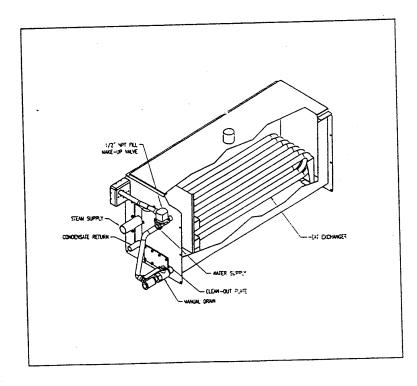
The foregoing shall constitute the total liability of Seller in the case of defective performance of all or any of the equipment or services provided to Buyer. Buyer agrees to accept and hereby accepts the foregoing as the sole and exclusive remedy for any breach or alleged breach of warranty by Seller.

### Description of Units



Herrmidisteam - SS (For raw water applications)

This humidifier is designed for use with any raw water application. The steam coil is made of copper with a nickel coating. The coating minimizes scale build-up and facilitates scheduled cleaning and maintenance. The entire cabinet is made of stainless steel. A skimmer system is provided to automatically drain water contaminants.



Herrmidisteam – SS - DI (For use with demineralized or reverse osmosis water applications)

This humidifier is designed for use with deionized or reverse osmosis water applications. The steam coil and cabinet are made of stainless steel. The system is virtually maintenance – free, with no wasted water, heat or downtime.

## Dimensions and Capacities

Table 5-1: Mechanical dimensions for Herrmidisteam - SS for Raw Water (Copper Heat Exchanger(s))

| - C-1 |  |            | YE SOL   |              | Model        | Number |      |          |      |
|-------|--|------------|--|--------------|--------------|--------|------|----------|------|
|       | Description  | S# S8-2    | 00C  |              |              | #¥.8S- | 100C | ₩ # S8-1 |      |
|       |  | AL HESS    | ann.   | 20.2         | o mm         | 2 FE   | mm   | 選 in:    | i mm |
| No.   |  | 18.25      | 465  | 18.25        | 465          | 18.25  | 465  | 28.57    | 725  |
| Α     | Overall height   | 14.75      | 375  | 19.25        | 490          | 28.25  | 720  | 28.25    | 720  |
| В     | Face width   | 39.68      | 1010   | 39.68        | 1010         | 55.21  | 1400 | 55.21    | 1400 |
| С     | Face length  | 6.63       | 170  | 6.63         | 170          | 6.63   | 170  | 6.63     | 168  |
| D     | Distance from bottom to supply inlet   | 3,59       | 90   | 3.59         | 90           | 3.59   | 90   | 3.59     | 90   |
| E     | Distance from bottom to return outlet  Distance from bottom to supply inlet of |            | <del>                                     </del> | -            | -            | -      | -    | 14.28    | 360  |
| F     | second heat exchanger  | ļ <u>.</u> | <del> </del>                                     | <del> </del> | <del> </del> |        | 1    | 11,24    | 285  |
| G     | Distance from bottom to return outlet of second heat exchanger                 | <u> </u>   | <u> </u>   |              | <u> </u>     | 2.75   | 85   | 3.25     | 85   |
| н     | Distance from side to heat exchanger   | 3.25       | 85   | 3.25         | 85           | 3.25   | 1 83 | 3.23     |      |

Table 5-2: Mechanical dimensions for Herrmidisteam-SS - DI for Deionized Water (Stainless Steel Heat Exchanger(s))

| 20  |  |          |                |              | ∱Model.      |                           |      | 00.4   | 0000        |
|-----|--|----------|----------------|--------------|--------------|---------------------------|------|--------|-------------|
|     | Description  | SS       | 200S.          | + X SS       |              | <sub>ु</sub> ्र-, <b></b> | 008  | ∞_8S-1 | <b>DAAS</b> |
|     |  | ing      | mm             | jn.          | mun          | ln.                       | mm   | ln.    | mm          |
| 313 |  | 18.25    | 465            | 18.25        | 465          | 18.25                     | 465  | 28.57  | 725         |
| Α.  | Overall height   | 14.75    | 375            | 19.25        | 490          | 28.25                     | 720  | 28.25  | 720         |
| В   | Face width   | 39.68    | 1010           | 39,68        | 1010         | 55.21                     | 1400 | 55.21  | 1400        |
| c   | Face length  | 6.63     | 170            | 6.63         | 170          | 6.63                      | 170  | 6.63   | 168         |
| D   | Distance from bottom to supply inlet                           | 3.59     | 90             | 3,59         | 90           | 3.59                      | 90   | 3.59   | 90          |
| E   | Distance from bottom to return outlet                          | 3.59     | <del>  ~</del> | <del> </del> |              |                           | -    | 14.28  | 360         |
| F   | Distance from bottom to supply inlet of second heat exchanger  | <u> </u> |                | <u></u>      | <del> </del> |                           |      | 11.24  | 285         |
| G   | Distance from bottom to return outlet of second heat exchanger | -        | -              | <u> </u>     |              |                           |      |        |             |
| Н   | Distance from side to heat exchanger                           | 3.25     | 85             | 3.25         | 85           | 3.25                      | 85   | 3.25   | 85          |

# **Dimensions and Capacities**

Table 6-1: Capacities for units with copper heat exchanger(s)

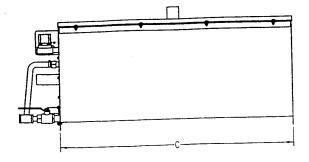
|         |            |           | SECTION AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS | and the same of the same of | coper heat ext |          |             | 200          |
|---------|------------|-----------|--|-----------------------------|----------------|----------|-------------|--------------|
|         |            |           |  | Sec Steam                   | Tree Life      |          |             |              |
|         |            |           |  | Sio-                        | Day.           | kPa -    | pal         | ∵ kPa        |
|         |            |           | 10   | <b>66</b> L                 | 137            |          | 15          | , 103<br>103 |
| SS-200C | 60 lbs/hr  | 27 kg/h   | 200 lbs/hr   | 91 kg/h                     | 250 lbs/hr     | 113 kg/h | 290 lbs/hr  | 132 kg       |
|         | 120 lbs/hr | 54 kg/h   | 350 lbs/hr   | 159 kg/h                    | 450 lbs/hr     | 204 kg/h | 530 lbs/hr  | 240 kg       |
| SS-500C |            | 159 kg/h  | 630 lbe/hr   | 286 kg/h                    | 770 lbs/hr     | 349 kg/h | 840 lbs/hr  | 381 kg       |
| SS-800C | 350 lbe/hr | 108 Kg/II | 000 100111   | 601 kg/h                    | 1550 lbs/hr    | 703 kg/h | 1650 lbs/hr | 748 kg       |

Table 6-2: Capacities for units with stainless steel heat exchanger(s)

| C           |            |           |                                | WINDS THE STATE OF | opper heat exc | The state of the state of | 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | en lier en neuglie. De |
|-------------|------------|-----------|--------------------------------|--|----------------|---------------------------|---|------------------------|
|             |            |           |                                | Sleam I  | Xesene         |                           |   |                        |
| ucce Number | pa 22      | NPA .     | bal.                           | kPa  | pel            | )cPa                      | ) pel                                   | KPa                    |
|             |            | 30.00     | 10                             | .00  | 13             | 90                        | 15                                      | 103                    |
|             |            | A CHARLES | The Market of the Serve of Co. | 36 kg/h  | 100 lbs/hr     | 45 kg/h                   | 110 lbs/hr                              | 50 kg/l                |
| SS-DI-200S  | 40 lbs/hr  | 18 kg/h   | 80 lbs/hr                      | 30 kg/ii   | 100 100 11     |                           |   | 70 kg/                 |
| SS-DI-500S  | 70 lbs/hr  | 32 kg/h   | 140 lbs/hr                     | 64 kg/h  | 165 lbs/hr     | 75 kg/n                   | 175 lbs/hr                              | 79 kg/                 |
| SS-DI-800S  | 180 lbs/hr | 82 kg/h   | 420 lbs/hr                     | 191 kg/h   | 590 lbs/hr     | 268 kg/h                  | 650 lbs/hr                              | 295 kg                 |
| 33-01-0005  | 133        | <u> </u>  | <del> </del>                   | 386 kg/h   | 1120 lbs/hr    | 508 kg/h                  | 1250 lbs/hr                             | 567 kg                 |

### Dimensions and Capacities

Herrmidisteam - SS (All Models)



Herrmidisteam – SS with Single Heat Exchanger Models 200, 500 and 800

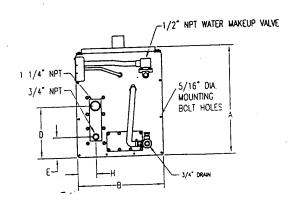
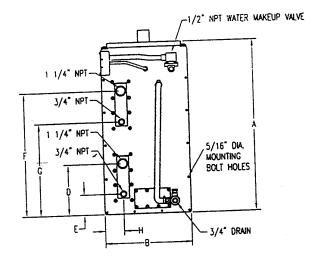


Table 7-1: Humidifier Weights

| Model   | Operatin | g Weight | Shipping | Weight |
|---------|----------|----------|----------|--------|
| Number  | lbs      | kg       | bs       | kg -   |
| SS-200  | 336      | 152      | 125      | 57     |
| SS-500  | 350      | 159      | 139      | 63     |
| SS-800  | 950      | 431      | 320      | 145    |
| SS-1600 | 1450     | 658      | 410      | 186    |

Herrmidisteam – SS with Dual Heat Exchanger

Model 1600 Only

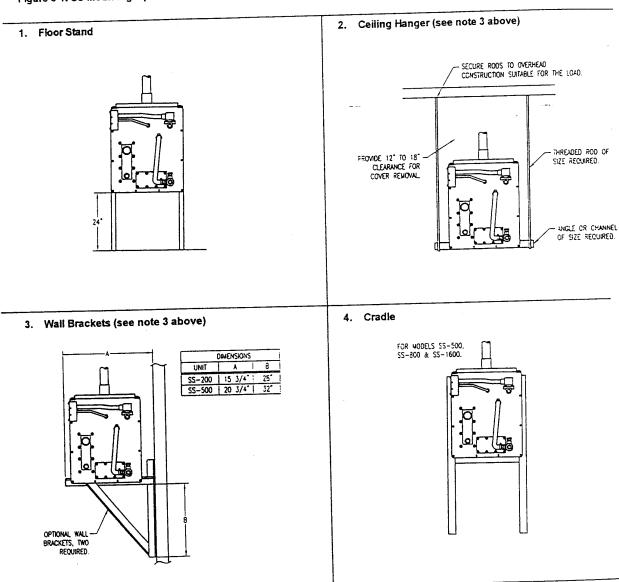


#### Unit Mounting

#### **Mounting Notes:**

- For the magnetic water level switch and the skimmer system to properly operate, the humidifier must be mounted level in both directions.
- Access (12" to 18" minimum) for periodic removal of the top cover is recommended. In most cases, scale that forms on the heat exchanger continuously flakes off as it forms and
- the loose scale settles to the bottom. A clean-out opening is provided for periodic removal.
- Due to the size and weight of the Model 500, 800, and 1600, the trapeze hanger and wall brackets are not recommended.

Figure 8-1: SS Mounting Options



### **Plumbing**

Figure 10-1 shows piping of the Hermidisteam from the steam supply main with condensate returned to a vented gravity flow return system. Note the steam trap installed at the bottom of the branch rise feeding the steam valve of the Hermidisteam. Failure to install this trap will cause water hammer, which could damage the Hermidisteam heat exchanger.

Figure 9-1

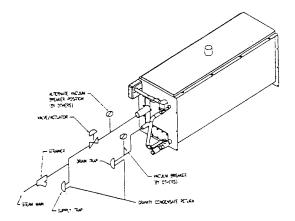
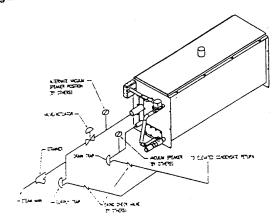


Figure 10-2 depicts the same supply configuration however the condensate return main is above the Hermidisteam and the condensate must be "lifted". Lifts in excess of six inches per PSI steam inlet pressure should not be attempted. Check valves down stream of both steam traps are necessary to avoid hammer and associated problems.

In both instances, Figure 9-1 and 9-2, vacuum breakers are necessary to ensure condensate can drain from the heat exchanger when the steam valve closes.

Figure 9-2



### Plumbing

Figure 10-1: Herrmidisteam - SS

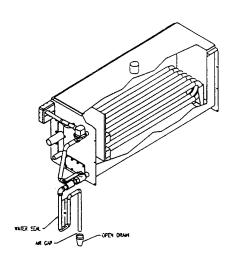


Table 10-2: Water Seal Height Recommendations

| Water Seal H                     | Height (H)    |
|----------------------------------|---------------|
| Unit output<br>(pounds per hour) | H<br>(inches) |
| 5-138                            | 12            |
| 39-183                           | 15            |
| 184 and higher                   | 18            |

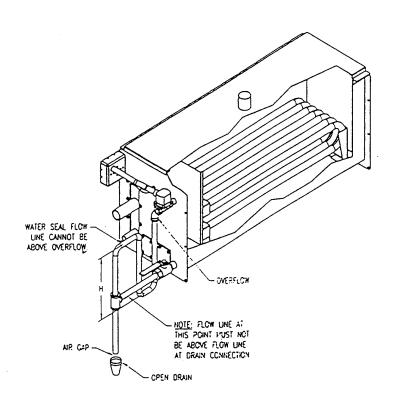
#### Drain Piping

A drain line should be extended from the skimmer/drain connection to a sanitary waste. A water seal should be provided in the drain line of sufficient height to contain the pressure developed within the humidifier. Without this, steam will be forced through the drain line, which would be objectionable. The depth of the water seal must be sufficient to overcome the static pressure of the air handling system plus the pressure developed by the humidifier itself. (Refer to Table 10-2)

### Plumbing

Figure 11-1: Alternate Water Seal and Valve

Used when water seal must be elevated above flow line of drain connection (Humidifier near floor). Water seal height recommendations refer to Table 10-2.



### **Electrical**

The electrical supply is 24 VAC. The control cabinet should be mounted in a location for service. All wining must be in accordance with all governing codes and the Herrmidisteam-SS wiring diagram. A wiring diagram is inside the control cabinet. The wiring between the control cabinet and the humidifier must be 105° C rated wire.

Please refer to the Hermidisteam Controller Section in this manual for electrical connection information on the controller.

Caution: Only qualified electrical personnel should perform installation and start-up procedures.

# **Steam Distribution Mounting**

#### Steam Distributor Pipes

Hermidifier supplies stainless steel duct distributor pipe(s) for use in injecting pure steam into ducts. Refer to Figures 1, 2, or 3 (page 13) for proper placement. A minimum of 3' clearance downstream is required for most applications. However, differing psychometric conditions may require a greater or lesser steam absorption distance. Consult the factory to design a guaranteed absorption CS-Series Distribution system.

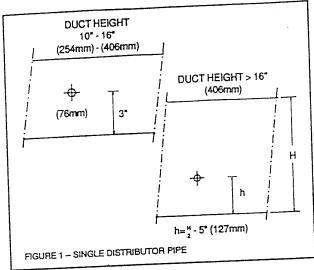
#### NOTE

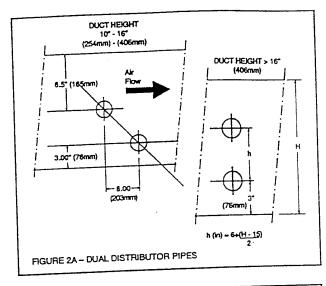
- The rubber steam hose carries steam to the distributor pipe and condensate back to the unit. It must have an 8% (1" per foot) pitch back to the unit. Support the steam hose so it will maintain the proper pitch when in operation or at rest.
- If any low spots are in the steam line or the unit is mounted higher than the distribution system, a condensate separator is available from the factory.
- If you must split the discharge of one steam outlet into two ducts with the same static pressure a "Y" connector is available form the factory. The length of steam hose after the "Y" connector must be the same for equal distribution of steam.

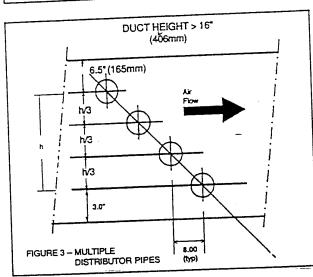
- Mount the unit as close to the distribution pipe as possible. Use 2", Type L insulated copper whenever the length of run exceeds 20 feet. Do not exceed a 30-foot run, as the capacity of the unit will be decreased by as much as 15% and the increased static pressure could cause problems with the fill system.
- Maximum duct static pressure: 5" for units with up to 30 lb/hr steam output. 7" for units over 30 lb./hr steam output.
- Internal duct insulation should be removed in the "bulk evaporation" zone (Consult factory representative)
- Steam holes in the distribution pipe are located 2" from mounting plate and designed for a maximum duct wall thickness of 1". Consult factory if special hole locations are required.
- Do not mount the standard distribution pipe in a vertical downflow or vertical position in a horizontal flow system. Special pipes are available, consult the factory.

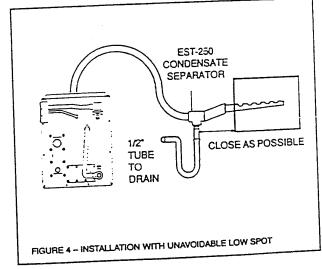
# **Steam Distribution Mounting**

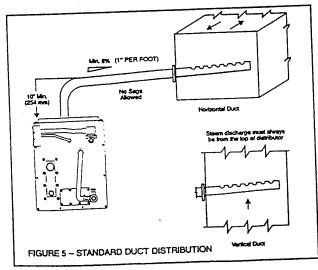
## **Steam Distribution for Ducted Systems**

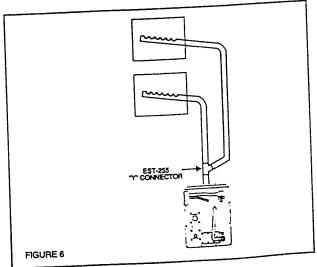












## **Control Circuit Connections**

The Hermidisteam – SS Humidifier has the capability to utilize one of the following control schemes:

- 1. On/Off
- 2. Proportional

Controls may be supplied by the factory or by others. The following information applies to all controls factory supplied or furnished by others.

All external electrical control circuits are to be connected to the terminal strip located on the control board in the Hermidisteam Controller. Field wiring from humidistat to humidifier and between safety devices, such as high limit humidistat and air proving switches, should be 18 AWG stranded or 20 AWG solid wire.

Wall devices should be mounted at a height similar to that of a typical thermostat and should be located in an area that will provide good representation of the overall space being humidified. Do not mount wall devices directly in the air stream of a supply grille.

Duct high limit devices should be mounted downstream of the steam distributors – far enough that under normal conditions in the air stream that the steam has been completely absorbed, typically 10 ft. The device should be located such that it can sense humidified air as it approaches saturation. Do not mount in dead air spaces such as inside of comers.

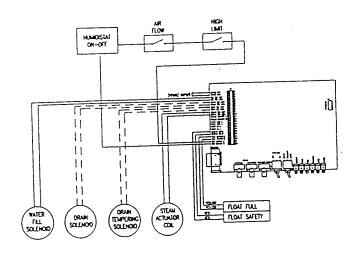
Air proving devices should be mounted so that they sense airflow (or the absence of it). Wire the device so that it closes when airflow is present and will open when there is no airflow. The purpose of the device is to prove that airflow is present before steam is distributed into the duct.

The following information and diagrams are shown for each control scheme. Please refer to the control scheme (shown on the next page) that your humidifier was set up for and follow the diagram for control circuit connections.

# **Control Circuit Connections**

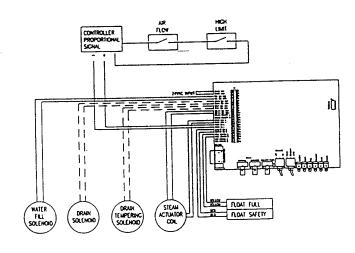
### On- Off Control Circuit Connections

- Control Input- Unit will operate with any twoposition device. Demand for humidity will close the contact.
- Limit Input- Unit will operate with any two position device. The humidistat contact will open on humidity rise.



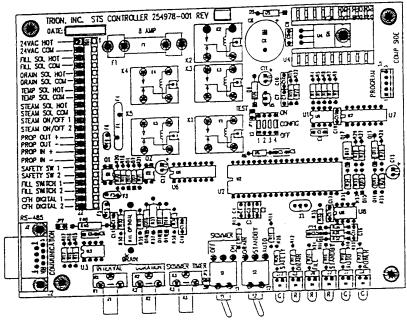
### **Proportional Control Circuit Connections**

- Control Input Interpreted by the humidifier as a demand of output signal. Input device should be linear. Unit can accept any VDC or mADC signal within a range of 0-10 VCD or 0-20 mADC.
- Limit Input- Unit will operate with any two position device. The humidistat contact will open on humidity rise.



# Herrmidisteam Controller

The Hermidisteam Controller is provided with each Hermidisteam -SS Humidifier. The microprocessor board shown in Figure 16-1, is located in the Controller enclosure. The Controller is remote mounted with interconnections from the microprocessor board "TB1" to the humidifier as shown on page 15. 24 VAC is the only power source required to the Controller. Below is a description of the components on this system.



#### Drain

- 1. (R1) Drain Interval Potentiometer The drain cycle can be set automatically from 0 to 48 hours for a complete system drain.
- 2. (R2) Drain Duration Potentiometer The drain duration for a complete system drain can be set from 0 to 30 minutes.
- 3. (R3) Drain Skimmer Potentiometer This is only used on humidifiers using potable or raw water. The skimmer can be set from 0 to 5 minutes. This allows the water fill to continue for this preset time thus overflowing into the skimmer tray washing away floating contaminates.

#### Skimmer

(S1) Skimmer switch can be activated by placing switch in the "on" position.

#### Operation

- 1. (S2) Switch can be placed in the following modes:
  - "Drain this position opens drain solenoid.
  - "Standby" This position allows the system to fill and be ready for steam input. The steam valve will remain closed in this position.
  - "Auto" This position allows for all preset conditions to control the operation of the humidifier.

### errmidisteam Controller

#### Lights

- 1. "Safety" Indicates that the water level is high enough to open the steam valve thus starting the humidification cycle.
- "Drain" Indicates that the drain solenoid is open. Also indicates by "flashing" if the drain cycle on S2 was activated and the system has not been reset by switching in the "Standby"
- 3. "Fill" Indicates the water fill solenoid is open.
- 4. "Standby" Indicates that the standby mode is active. During this mode, the steam valve is closed and the system is ready for operation.
- 5. "Auto" Indicates that the system is in the automatic mode and will operate as preset.
- 6. "Power" Indicates 24 VAC power is being supplied to the Controller.

#### Configuration

- 1. (S3) Dip Switch Four position switch indicates the following conditions:
  - a. S3 1 and 2: Proportional Control only

OFF - OFF = 0-10 VDC OFF - ON = 4-20 mA

ON - OFF = 0-20 mA

ON - ON = 0.5 VDC

b. S3 - Proportional or ON/OFF

OFF = Proportional ON = ON/OFF

c. S3 - 4: Tempering

OFF = OFF ON = ON

#### Communication

1. RS-485 - Communication port to interconnect with the Building Management System.

### Start-Up and Operation

#### Mounting

Check mounting to see that unit is level and securely supported before filling with water.

Verify all piping connections have been completed as recommended and that steam and water pressures are available.

Verify that all wiring connections have been made in accordance with wiring diagram.

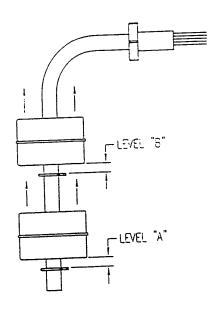
#### Start-Up for Humidifier

- 1. Open shut-off valve on the water supply line.
- 2. Activate the power at the Hermidisteam Controller. This will open the solenoid-operated water fill valve, filling the evaporating chamber.
- 3. Filling will continue until water reaches level "A" on the Stainless Steel Magnetic Float (See Figure 18-1).
- 4. When filling reaches level "A" on the bottom float, the steam valve will open allowing steam to enter the heat exchanger. Filling will continue until the float reaches level "B" on the top float and closes the water fill valve.
- 5. Check out function of field installed air flow switch, high limit duct humidistat and controlling humidistat to ensure that they are in control of the steam valve

#### Start-Up for Supply Steam

- 1. Turn all humidistats to the "off " position.
- 2. Open the supply steam valve and allow the supply condensate trap to warm up and drain away condensate from the supply piping.
- 3. Set desired relative humidity on the high limit humidistat (if used). Recommended setting is 85%.
- Turn the control humidistat to allow the steam valve to open and supply steam to the heating coil.
- 5. After the humidifier has run for a period of time, turn the control humidistat off so that the humidifier steam valve closes. Then close the supply steam valve to the humidifier.
- Remove the strainer screen from the inlet strainer and clean. Check the steam traps to insure they are also clean.
- Test all humidistats and airflow switches to insure they are operating property.
- 8. Reset control device to the desired set point.

Figure 18-1: Stainless Steel Magnetic Float Maintains Water Levels



# Start-Up and Operation

#### Water Refill

During operation, the water line will drop to level "A". At this level the fill valve opens and remains open until the water level reaches level "B".

### Surface Skimmer (Portable Water Only)

Each time the evaporating chamber refills, the upper of water is immediately drained off through the skimmer. The time of drain for the skimmer can be set for, 0 to 5 minutes. The skimming process removes the mineral residue that was formed during the previous evaporating cycle. This skimming process reduces the frequency of cleaning and allows the humidifier to operate at peak performance.

#### Draining

This system provides automatic drain cycles. The drain solenoid valve can be cycled to open within a range of 0 to 48 hours. The time interval of drain can be varied from 0 to 30 minutes.

#### **Drain Water Tempering**

If drain tempering is required, a switch on the controller can be activated to open a fresh water solenoid valve thus adding fresh water to the heated drain water.

## Recommended Maintenance

#### **CAUTION:**

Allow unit to cool before performing any maintenance. Manually open the drain valve and the fill valve will be energized. Let the fill water run until the tank is cooled then shut off the field installed supply water valve.

Hermidisteam-SS is designed to deal with dissolved minerals in one of two ways depending on the degree of hardness (up to 10 grains per gallon) the surface skimmer action plus periodic cleaning is usually adequate. For high mineral content water (above 10 grains per gallon) a periodic drain and flush along with periodic cleaning may be helpful.

The frequency of cleaning will be dictated by water condition and evaporation load.

#### **CAUTION:**

WHEN PERFORMING MAINTENANCE ON THIS SYSTEM ALWAYS TURN THE ELECTRIC POWER OFF AT THE CONTROL PANEL. CLOSE STEAM SUPPLY AND WATER MAKE-UP VALVES.

#### Seasonal Maintenance

1. Cleaning Tank

Remove loose scale in humidifier tank before the build-up reaches the underside of the heat exchanger(s).

2. Cleaning Magnetic Float

Remove any scaling on the movable float and the float rod using stainless steel wool. Ensure that the float moves freely.

3. Cleaning Skimmer Section

Clean any scaling inside the skimmer tray. Loosen deposits from the piping to the tray using a pipe brush or any long tool. Flush the piping to remove any remaining residue.

4. Inspect Gaskets

Inspect gaskets for tears or improper seal. Replace as necessary.

#### Maintenance Out Of Season

After the humidification season, a complete inspection and cleaning of the heat exchanger(s), float system, skimmer and water chamber are recommended. After cleaning, the unit should remain empty until humidification is required. On the units with nickel plated copper heat exchangers, do not use a sharp object when cleaning. Exposure to the copper surface will impair its ability to shed scale during operation.

Adjusting the Surface Skimming

The skim time determines the quantity of water skimmed with each fill cycle. The skim time is adjustable as noted on the Herrmidisteam Controller.

Herrmidisteam-SS-DI Only

The humidifier should be inspected for leaks annually. All safety devices in the control cabinet should be cycled on and off to verify that they are functioning.

Cleaning the DI Evaporating Chamber
As long as mineral-free water is used in the DI
humidifier, no cleaning or flushing of the
evaporating chamber should be necessary.

#### Cleaning the Steam Distribution System

1. Strainers

Once a year, check the strainer for proper operation. Open a valve or plug on the exhaust port for self-cleaning.

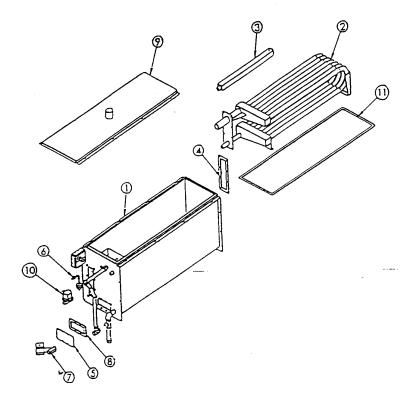
2. Traps

Once a year, check for proper operation. All the working parts on the traps are accessible without removing the trap from the system piping. The F & T traps have a clean-out plug at the bottom of the trap body for easy flushing.

# **Trouble Shooting Guide**

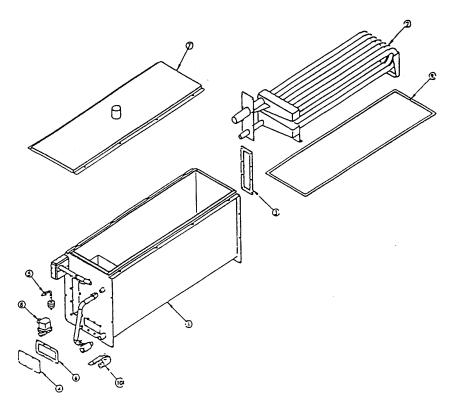
| Symptom                     | Possible Cause  | Recommended Action  |
|-----------------------------|---|---|
|                             | No control transformer output. Humidistat is not calling. | Verify control voltage. Set humidistat to "call" inspect for faulty humidistat.   |
|                             | Safety controls open (high limit, air proving, etc)       | Check safety controls   |
|                             | Faulty control board.                                     | Verify control voltage and float. Wires are connected correctly.  |
| Humidifier Will<br>Not Heat | Steam stop valve closed.                                  | Verify valve is opened.   |
|                             | Steam trap plugged  | Clean trap body   |
|                             | Low or no steam:  | Verify steam is present.  |
|                             | Steam strainer plugged.                                   | Clean strainer.   |
|                             | No water pressure.  | Verify manual water supply valve is open.   |
|                             | Faulty water fills valve.                                 | Verify action of fill solenoid valve, verify control voltage present at coil. Audible click should be heard as solenoid operates. |
| Humidifier Will Not<br>Fill | Plugged water strainer.                                   | Open strainer.  |
|                             | Plugged valve.  | Clean valve.  |
|                             | Faulty control board.                                     | Verify control voltage.   |
|                             | Float malfunction   | Replace float   |
| Humidifier Does Not         | Manual drain is not fully closed.                         | Close manual ball valve   |
| Stop Filling                | Fill valve is stuck open.                                 | Check valve for foreign matter.   |
|                             | Fill valve is installed backwards.                        | Check for correct water flow, through valve, note arrow.  |
|                             | Automatic drain valve not seating.                        | Clean ball and seat of valve.   |
|                             | Manual drain is not fully closed.                         | Close manual ball valve   |
|                             | Excessive skimming amount.                                | Reduce skimmer or skim time.  |
|                             | Fill valve is stuck open.                                 | Check valve for foreign matter.   |
| Low Output                  | Low supply steam pressure.                                | Check steam supply pressure.  |
|                             | Steam valve inoperable.                                   | Not opening fully.  |
|                             | Steam trap blocked.                                       | Not passing condensate.   |
|                             | Scale coated heat exchanger.                              | Clean heat exchanger.   |
| Makeup water valve          | Magnetic Float incorrectly wired.                         | Confirm that wiring agrees with diagram.  |
| short circuits              | Float is coated with scale.                               | Clean float.  |

# Herrmidisteam – SS Parts List



| lo.          | Description                       | Part Number |
|--------------|-----------------------------------|-------------|
| 1            | Tank Ass'y - Model 200            | 355014-001  |
| 1            | Tank Ass'y – Model 500            | 355049-001  |
| 1            | Tank Ass'y - Model 800            | 355050-001  |
| 1            | Tank Ass'y – Model 1600           | 355651-001  |
| <u>.</u>     | Heat Exchanger - Model 200C       | 355017-001  |
| 2            | Heat Exchanger - Model 500C       | 355053-001  |
| 2            | Heat Exchanger - Model 800C/1600C | 355055-001  |
| 3            | Skimmer - Model 200C/500C         | 255018-001  |
| 3            | Skimmer – Model 800C/1600C        | 255058-001  |
| <del>-</del> | Gasket                            | 254946-001  |
| 5            | Access cover                      | 254981-001  |
| 6            | Float Switch                      | 254971-001  |
| <del>7</del> | Solenoid Valve                    | 255021-001  |
| 8            | Gasket                            | 255025-001  |
| 9            | Cover Ass'y - Model 200           | 255027-001  |
| 9            | Cover Ass'y – Model 500           | 255056-001  |
| 9            | Cover Ass'y Model 800/1600        | 255057-001  |
| 10           | Solenoid Valve                    | AH-216-1    |
| 11           | Gasket                            | 155036-001  |

# Herrmidisteam – SS - DI Parts List



| ο.                | Description                       | Part Number |
|-------------------|-----------------------------------|-------------|
| 1                 | Tank Ass'y Model 200              | 355014-001  |
| 1                 | Tank Ass y - Model 500            | 355049-001  |
| 1                 | Tank Ass'y - Model 800            | 355050-001  |
| 1                 | Tank Ass'y - Model 1600           | 355051-001  |
| 2                 | Heat Exchanger - Model 200S       | 354712-001  |
| 2                 | Heat Exchanger - Model 500S       | 355052-001  |
| 2                 | Heat Exchanger - Model 800S/1600S | 355054-001  |
| 3                 | Gasket                            | 254946-001  |
| 4                 | Access cover                      | 254981-001  |
| 5                 | Float Switch                      | 254971-001  |
| 3                 | Gasket                            | 255025-001  |
| 7                 | Cover Ass'y - Model 200           | 255027-001  |
| 7                 | Cover Ass'y – Model 500           | 255056-001  |
| <del>.</del><br>7 | Cover Ass'y - Model 800/1600      | 255057-001  |
| 8                 | Solenoid Valve                    | AH-767-1    |
| 9                 | Gasket                            | 155036-001  |
| 10                | Ball Valve                        | AH-253SS    |



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