

READ AND SAVE THESE INSTRUCTIONS

VAPORMIST[®] and VAPORMIST[®] DI ELECTRIC STEAM HUMIDIFIERS

Installation Instructions and Maintenance Operations Manual

**For Toll-Free Technical Support,
Call 1-800-328-4447**



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DRI STEEM[®]
HUMIDIFIER COMPANY



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TO THE PURCHASER AND INSTALLER

Thank you for purchasing our VAPORMIST® humidifier. We have designed and built this equipment to give you complete satisfaction and trouble-free service for many years. Familiarizing yourself with this manual will help ensure you proper operation of the equipment for years to come.

This manual covers the installation and maintenance procedures for both the VAPORMIST and VAPORMIST DI humidifiers.

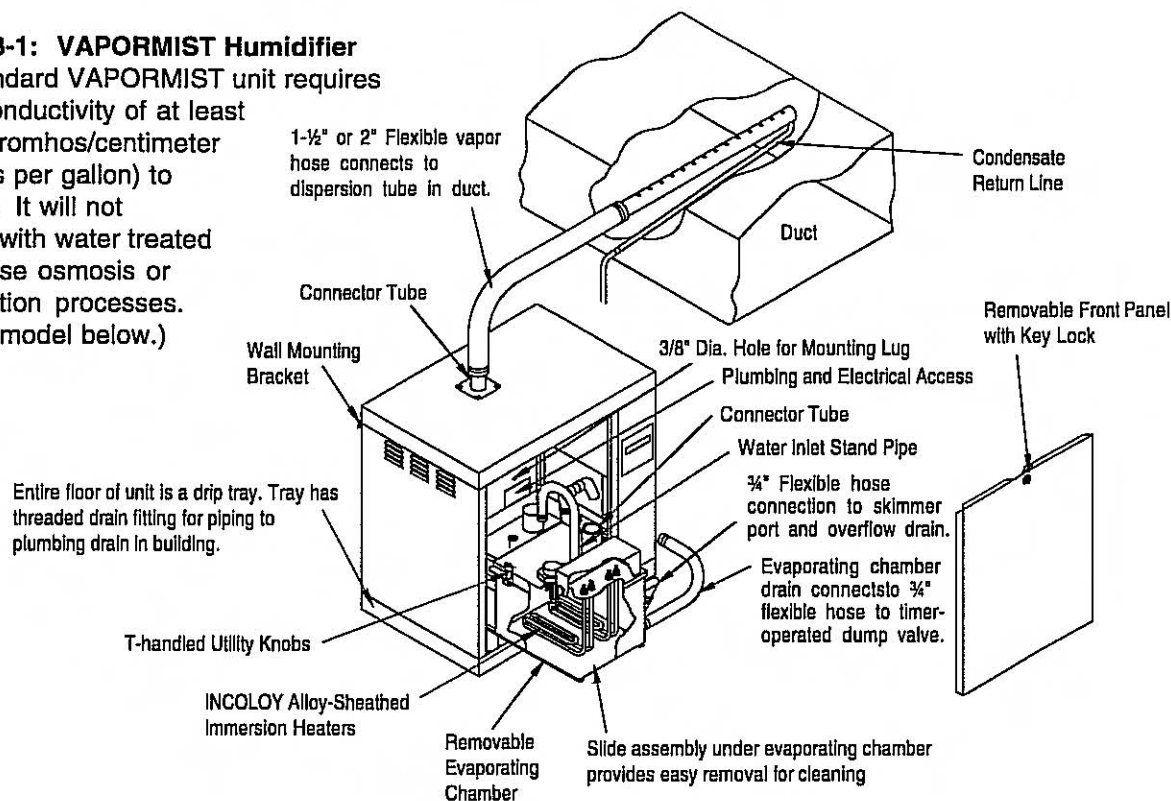
DRI-STEEM Humidifier Company

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VAPORMIST® DIAGRAMS

Figure 3-1: VAPORMIST Humidifier

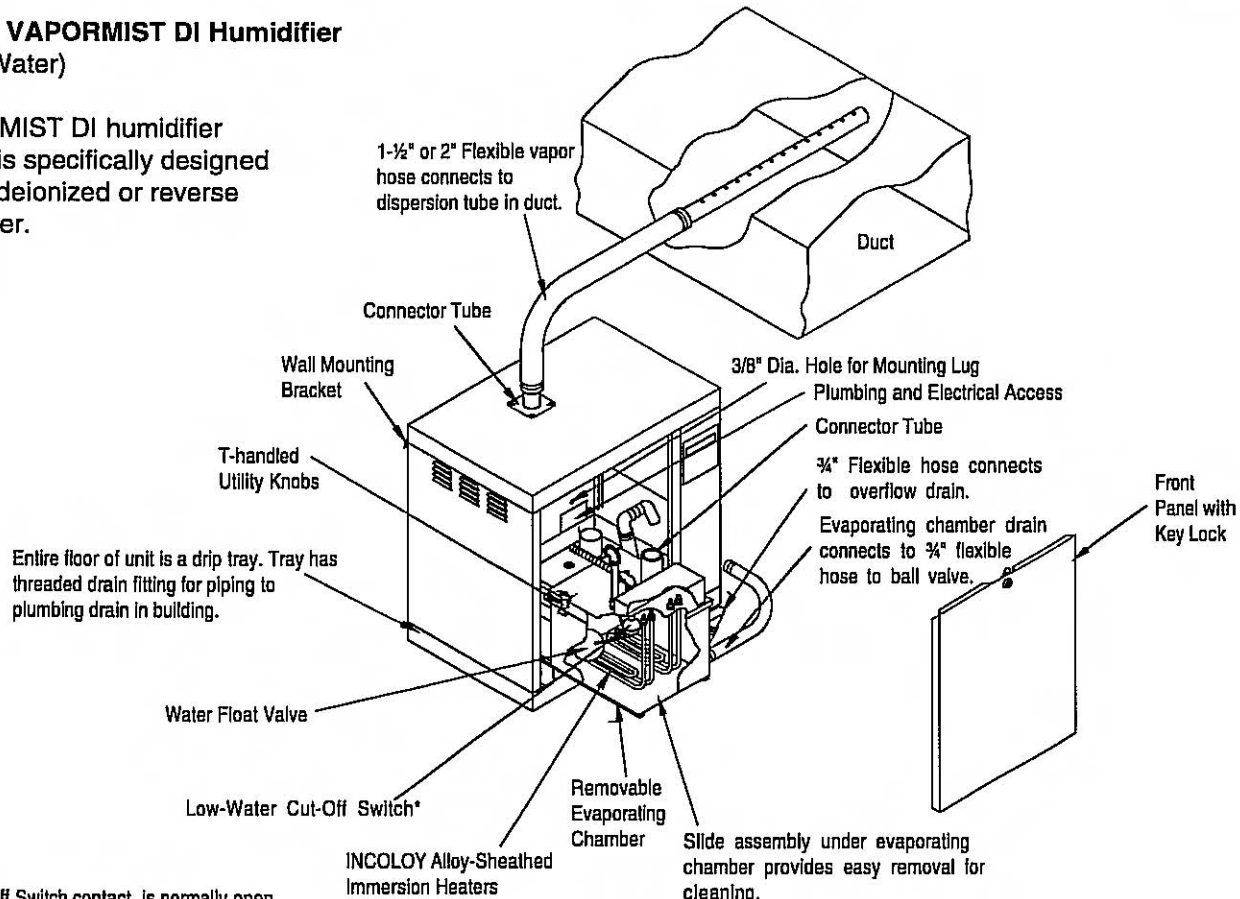
The standard VAPORMIST unit requires water conductivity of at least 100 micromhos/centimeter (2 grains per gallon) to operate. It will not operate with water treated by reverse osmosis or deionization processes. (See DI model below.)



OM-287A

Figure 3-2: VAPORMIST DI Humidifier (Deionized Water)

The VAPORMIST DI humidifier shown here is specifically designed for use with deionized or reverse osmosis water.



*Low-Water Cut-Off Switch contact is normally open when float is in its lowest position.

OM-288A

INSTALLATION

Locating and Mounting the VAPORMIST® Humidifier

The VAPORMIST humidifier is designed to hang on a wall, and should be installed in a space located near an air duct system.

Consider the following when selecting the location of the humidifier:

- Convenient access to duct
- Electrical and plumbing connections
- Required clearances

The mounting location should provide a minimum clearance of 36" to the front and 24" to the right side of the unit. This clearance is required for removing the evaporating chamber and accessing electrical compartment.

Electrical power supply, water make-up piping and drain piping must also be considered. These service connections

are made at the lower right rear corner of the unit.

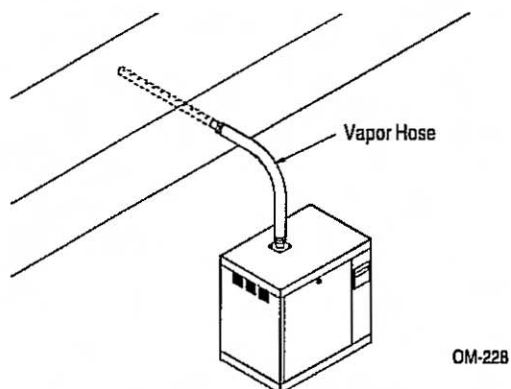
When mounting on a stud wall (studs 16" on center), locate studs and position mounting bracket in place so that each of the two holes (16" apart) will center on a stud. Mark hole locations and pre-drill 1/4" diameter pilot holes. Secure bracket to wall with lag bolts provided.

For hollow block or poured concrete wall mounting, position mounting bracket in place and mark the second hole from each end. Drill appropriate pilot hole for two 3/8" toggle bolts or two 3/8" machine bolt lead anchors. Secure bracket in place.

When the VAPORMIST humidifier is in final operation, the panel access keys should be removed and secured in a different place.

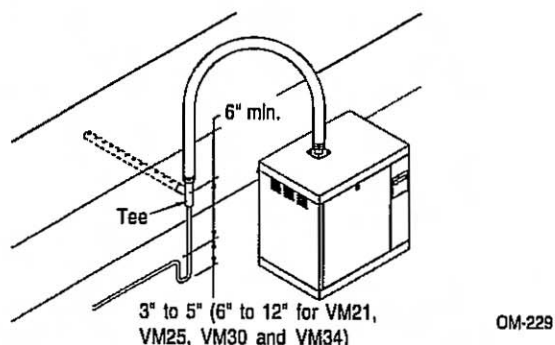
Examples of Mounting the Dispersion Tube

Figure 4-1: Mounted Horizontally in Duct



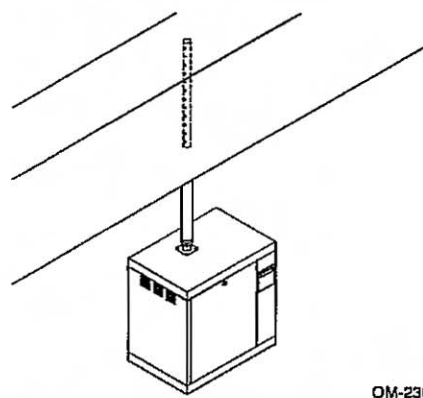
Vapor hose and dispersion tube should be pitched back to the humidifier with a gradual slope of 2" per foot (minimum). A single dispersion tube cannot be used with VM30 or VM34.

Figure 4-2: Mounted Horizontally in Duct and Lower than VAPORMIST Unit



A water seal must be located in drain line as shown to maintain steam pressure. A single dispersion tube cannot be used with VM30 or VM34.

Figure 4-3: Mounted Vertically (Optional)



This is not recommended on VM10, VM12, VM16, VM21, VM25, VM30 and VM34.

IMPORTANT NOTES: When duct is located more than 10 feet away from unit, vapor hose is not recommended; 1½" minimum I.D. hard pipe should be used instead. VM30 and VM34 must use a multiple tube steam dispersion system.

VAPORMIST® Mounting Tube with Condensate Drain Line

- ## Connecting Dispersion Tube to Humidifier

- Failing to follow these recommendations may result in excessive back pressures being imposed on the humidifier. This may lead to dispersion tube(s) spitting, steam blowing through water seals, or leaking gaskets. When the distance between humidifier and the dispersion tube(s) exceeds 20 feet, consult factory for recommendations.

Technical drawing of the Condensate Drain Kit, showing side and end views with dimensions and labels.

Dimensions:

- End view (square plate): 3.25" x 3.25"
- Side view (tube): 2.5" diameter
- Insertion Length: Indicated by a dimension line at the top.

Labels:

- Pre-molded High Temperature Resin Tubelets
- 1/2" O.D. Type 304 Stainless Steel Tubing (condensate drain)*
- 3/8" - 16 Support Nut (for 3/8" bolt) Welded To Tube
- Movable Escutcheon Plate (the escutcheon plate can adapt the tube to duckwork 2 1/2" wider than the designated insertion length.)
- 1/4" NPT*

Notes:

- *Optional

OM-351-1

Diagram illustrating the Condensate Drain Assembly components and installation details:

- Dispersion Tube
- Orificed Tubelets
- Duct
- Slip Coupling or Hose Cuff
- Vapor Hose or Hard Piping
- Header
- Pitch 1/8" per Foot (minimum)
- 1"x1½" SST Channel
- Air Flow
- Escutcheon Plate
- Mounting Bracket
- 6" min.
- 5" min.
- 1" Air Gap
- Open Drain
- Condensate Drain**
- Tube by Others (¾")

OM-224-r

- One or two tubes - 1/2" I.D.
- Three or more tubes - 3/4" I.D.

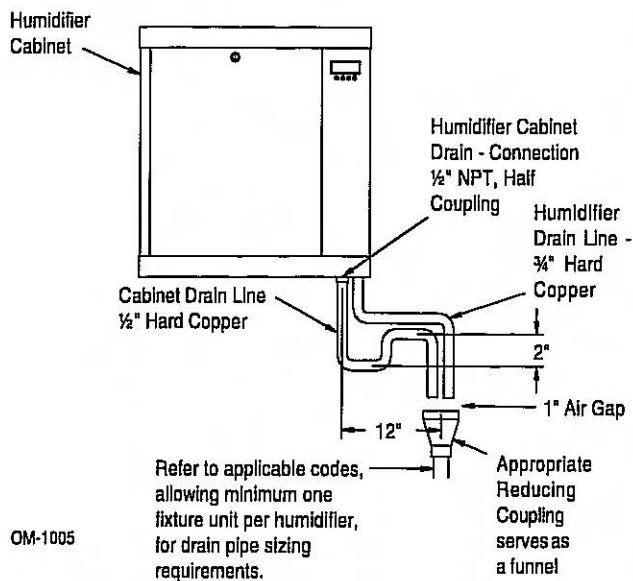
PIPING AND WIRING

Water make-up piping may be of any code-approved material (copper, steel, or plastic). The final connection size is 1/4" NPT. In cases where water hammer may be a possibility, a shock arrestor should be considered.

Drain piping may be of any code-approved material (copper, steel, or plastic rated for 212°F minimum). If drainage by gravity is not possible, a small lift pump should be used. (DRI-STEEM part #400280.)

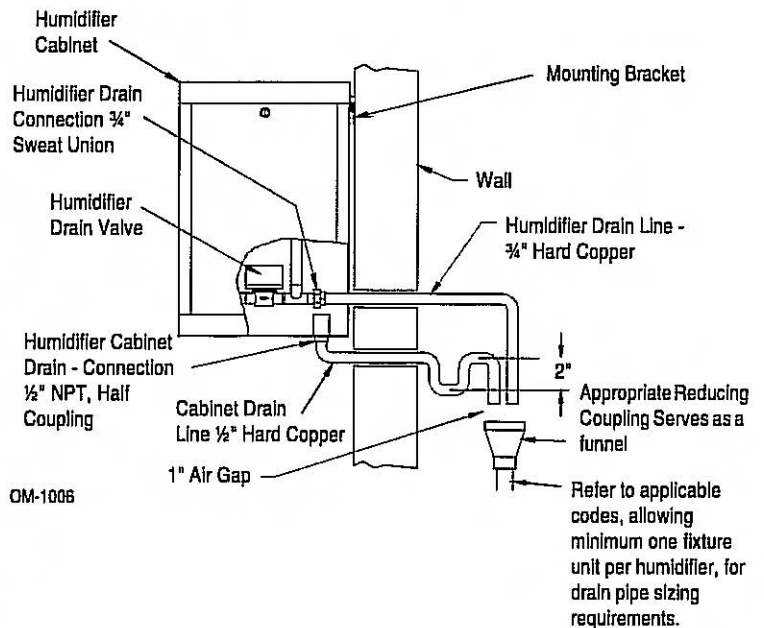
The final connection sizes are 3/4" copper sweat drain fitting and 1/2" NPT for cabinet drain. These connection sizes should not be reduced. (See figures 6-1 and 6-2 for proper drain piping configurations.) The evaporator drain and cabinet drain should be piped separately to and discharge into a floor drain. Combining the two drain pipes into a single drain line may result in the backflow of drain water into the humidifier cabinet, causing the unit to malfunction.

Figure 6-1: Drain Adjacent to Wall



OM-1005

Figure 6-2: Drain Through or in Wall



OM-1006

Note: Locate the cabinet drain line exit away from the humidifier drain line exit, if possible. This will prevent water vapor from migrating up the cabinet drain line, causing the cabinet bottom to rust. Extending the cabinet drain line may be effective also.

WIRING

All wiring must be in accordance with all governing codes, and with the VAPORMIST® or VAPORMIST DI wiring diagram. The diagram is located inside the removable front panel on the right-hand side of the humidifier cabinet.

ELECTRICAL SPECIFICATIONS AND CAPACITIES/DIMENSIONS

Table 7-1: Electrical Specifications and Capacities

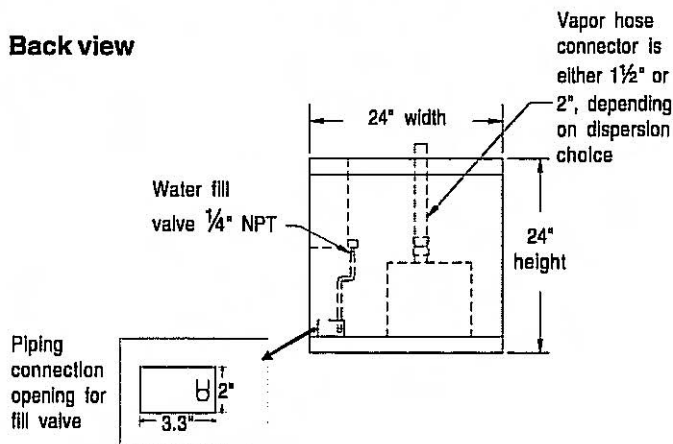
	VM2	VM4	VM6	VM8	VM10	VM12	VM16	VM21	VM25	VM30	VM34
Output per hour lb/gal/kg	6/7/2.7	12/1.4/5.4	18/2.2/8.2	24/2.9/10.9	30/3.6/13.6	36/4.4/16.3	50/6/22.7	64/7.7/29.0	75/9.1/34.0	91/10.9/41.4	102/12.4/46.2
Operating wt. lbs/kg	127/58	133/60	155/70	156/71	156/71	160/73	160/73	172/78	172/78	181/82	181/82
Shipping wt. lbs/kg	104/47	110/50	115/52	116/53	116/53	119/54	119/54	125/57	125/57	135/61	135/61
Amps @ 120v/1ø	16.7	33.3	—	—	—	—	—	—	—	—	—
*208v/1ø/3 wire	9.6	19.2	28.8	38.5	—	—	—	—	—	—	—
*240v/1ø/3 wire	8.3	16.7	25.0	33.3	41.7	—	—	—	—	—	—
480v/1ø	4.2	8.3	12.5	16.7	20.8	25.0	33.3	43.8	—	—	—
600v/1ø	3.3	6.7	10.0	13.3	16.7	20.0	26.7	35.0	41.7	—	—
*208v/3ø/4 wire	—	16.7**	25.0**	33.3**	29.1**	33.3	44.4	—	—	—	—
*240v/3ø/4 wire	—	14.4**	21.7**	28.9**	25.3**	28.9	38.5	—	—	—	—
480v/3ø	—	7.2**	10.8**	14.4**	12.6**	14.4	19.2	25.3	30.1	36.1	40.9
600v/3ø	—	5.8	8.7	11.5	10.1	11.5	15.4	20.2	24.1	28.9	32.7
KW	2	4	6	8	10	12	16	21	25	30	34

* On 208/240 single-phase (3-wire) and 3-phase (4-wire) supplies, the neutral line may be utilized for 120 volt when used in conjunction with SDU fan unit.

** For wire sizing, the highest leg draw is shown due to current unbalance in some cases. All VAPORMISTs operate at 50/60 Hz.

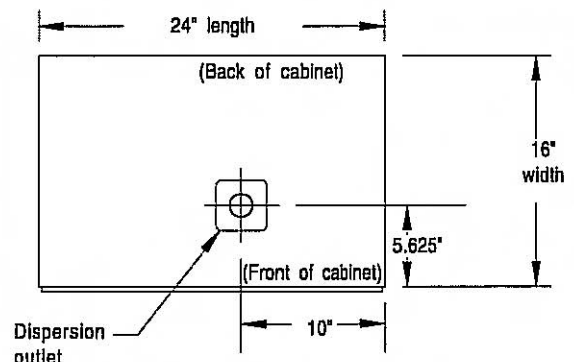
Figure 7-1: VAPORMIST Unit Dimensions

Back view

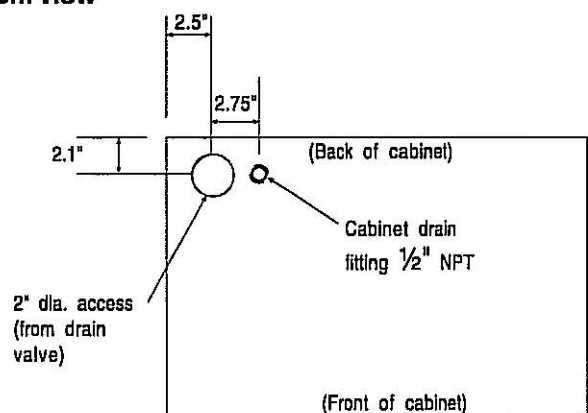


Note: For models VM12-34 dispersion tubes will be equipped with a condensate tube when a hose kit is used. See pages 4 and 5 for installation details.

Top view



Bottom view



AREA-TYPE APPLICATION USING SPACE DISTRIBUTION UNIT (SDU)

The SDU converts a VAPORMIST® duct humidifier into an area-type humidifier. Instead of the steam dispersion tube being located inside an air duct, the dispersion tube is built into the fan unit. A fan draws in room air and blows it across the dispersion tube, where it disperses the moisture into the room. The space distribution unit can be used on all models.

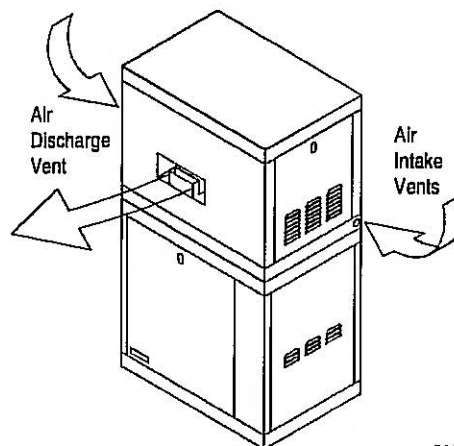
Mounting the SDU

The SDU may be placed directly on top of the VAPORMIST cabinet or mounted on a wall. A wall mounting bracket and two 3/8" lag bolts are provided with each fan unit. (See page 4 for mounting instructions.)

Rise and Throw

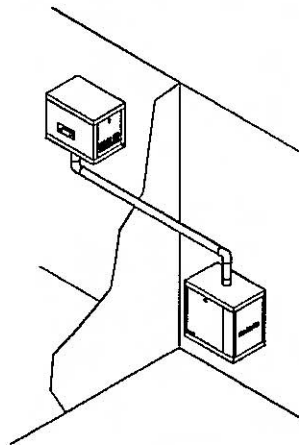
As steam is discharged from the humidifier, it quickly cools and turns to a visible fog that is lighter than air. As this fog is carried away from the humidifier by the airstream, it tends to rise toward the ceiling. If this fog contacts solid surfaces (columns, beams, ceiling, pipes, etc.) before it disappears, it could collect and drip as water. The greater the space relative humidity, the higher and farther the fog will rise and throw before disappearing. The distances the fog travels before it disappears are given in table 9-1 on page 9.

This optional fan unit mounts on top of the VAPORMIST cabinet.



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If necessary, the fan unit can be mounted on a wall, allowing the VAPORMIST to be remotely located.



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AREA-TYPE APPLICATION USING SDU

Table 9-1 lists the recommended minimum vertical (RISE), horizontal (THROW), and width (SPREAD) clearances for SDU area-type humidifiers at 40%, 50% and 60% RH in the space.

The SDU contains a 435 cfm blower (120/1/60) wired independently of the VAPORMIST humidifier. A wiring diagram of the SDU is included with the unit.

On a call for humidity, the humidifier will begin producing steam and the start relay will energize the SDU blower. When the steam reaches the SDU, a time-delay switch is activated. The humidifier will continue to produce steam until the humidistat is satisfied. The blower will continue to run until the time-delay switch shuts it off.

Once the SDU is mounted, panel access keys should be removed and secured elsewhere.

Figure 9-1: SDU Drain Detail

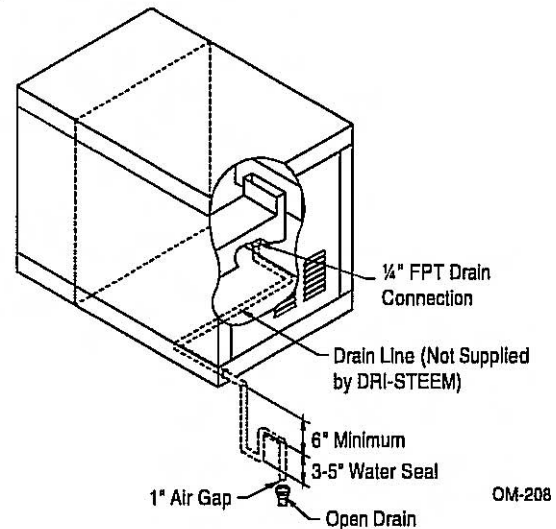


Table 9-1: SDU Visible Fog Travel

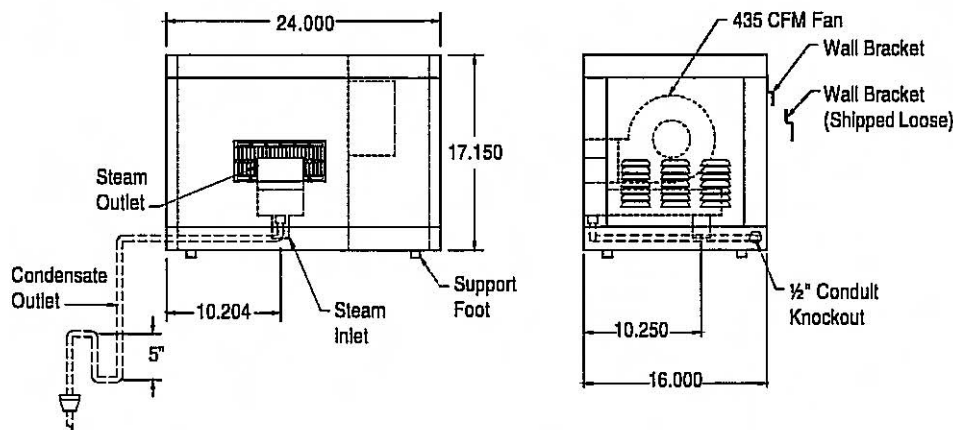
Humidifier Size	40% RH @ 70°F			50% RH @ 70°F			60% RH @ 70°F		
	Rise (ft/m)	Throw (ft/m)	Spread (ft/m)	Rise (ft/m)	Throw (ft/m)	Spread (ft/m)	Rise (ft/m)	Throw (ft/m)	Spread (ft/m)
VM4	1.0/30	5.0/1.5	1.0/30	1.5/50	6.5/2.0	1.5/50	2.5/80	7.5/2.3	2.5/80
VM6	1.0/30	5.0/1.5	1.0/30	1.5/50	6.5/2.0	1.5/50	2.5/80	7.5/2.3	2.5/80
VM8	1.0/30	5.5/1.7	1.0/30	1.5/50	6.5/2.0	1.5/50	2.5/80	7.5/2.3	2.5/80
VM10	1.5/50	6.0/1.8	1.5/50	2.0/60	7.0/2.1	2.0/60	3.0/1.0	8.0/2.5	3.0/1.0
VM12	1.5/50	5.0/1.8	1.5/50	2.0/60	7.0/2.1	2.0/60	3.0/1.0	8.0/2.5	3.0/1.0
VM16	2.0/60	7.0/2.1	2.0/60	2.0/60	7.0/2.1	2.0/60	3.0/1.0	9.0/2.7	3.0/1.0
VM21	2.0/60	7.5/2.3	2.0/60	2.0/60	10/3.0	2.0/60	3.0/1.0	12.0/3.7	3.0/1.0
VM25	2.0/60	8.0/2.5	2.0/60	2.5/80	10.5/3.2	2.5/80	3.5/1.1	12.5/3.8	3.5/1.1
VM30	2.0/60	8.0/2.5	2.0/60	2.5/80	10.5/3.2	2.5/80	3.5/1.1	12.5/3.8	3.5/1.1
VM34	2.0/60	8.0/2.5	2.0/60	2.5/80	10.5/3.2	2.5/80	3.5/1.1	12.5/3.8	3.5/1.1

Table 9-1 Notes:

Table 9-1 states the vertical (rise), horizontal (throw), and width (spread) dimensions that can be expected with the AREA-TYPE humidifiers.

Surfaces cooler than ambient or objects directly in the path of visible fog discharge may cause condensation and dripping.

Figure 9-2: SDU Mechanical Detail



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START-UP AND OPERATION

Introduction

After the system has been properly installed and connected to both electrical and water supplies, it may then be started.

Start-up and Checkout Procedures

Mounting

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

Piping

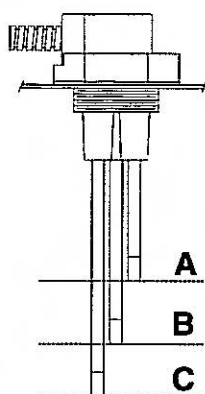
Verify that all piping connections have been completed as recommended and that water pressure is available.

Electrical

Verify that all wiring connections have been made in accordance with all governing codes and the enclosed VAPORMIST® wiring diagram.

Caution: Only qualified electrical personnel should perform start-up procedure.

Figure 10-1: Electronic Probe Control for Maintaining Proper Water Level (VAPORMIST® Only)



A simple three-probe conductivity sensor cycles a solenoid-operated water fill valve to maintain the proper water levels.

VAPOR-LOGIC₂ control

The VAPOR-LOGIC₂ is the standard controller for the VAPORMIST. For more information regarding the operation of the VAPOR-LOGIC₂ microprocessor, see the VAPOR-LOGIC₂ *Installation Instructions and Operations Manual*.

VAPORMIST®

Make-up Water Piping

Use cold or hot make-up water. If the water pressure is above 60 psi and/or water hammer would be objectionable, a pressure-reducing valve or shock arrester should be installed. Even though the VAPORMIST has an internal 1" air gap, some local codes may require a vacuum breaker.

Important: Minimum water supply pressure is 25 psi.

VAPORMIST DI

Make-up Water Piping

In this unit the electronic probe control is replaced by a float valve and a float operated low water cut-off switch.

The basic water level system and circuit for heater protection in the event of a low-water condition is common to all DI humidifiers and can be found in the wiring diagram located inside the removable front panel on the right-hand side of the unit.

Control Circuit

- a) Adjust humidistat to "call" setting.
- b) Open shut-off valve on water supply line. Unit should begin filling with water through the fill valve.
- c) Shortly before the fill valve shuts off, the heater cut-off switch will "make". When this switch makes, the heating element contactor(s) will be actuated after a ten-second delay. A time delay relay prevents contactor chatter due to bouncing of heater cut-off float.
- d) Check heater cut-off circuit.
 1. Close manual stop valve on water supply.
 2. Open ball valve and start draining unit.
 3. When water level drops past switching level on the heater cut-off float, the heating element contactor will drop out.
 4. When step 3 has been satisfactorily completed, close drain valve.
- e) Check function of field-installed safety controls, such as the fan proving switch. Contactor should drop out when any proving switch is "open".
- f) Check heater draw by testing and recording voltage and amperage in each phase. Readings should match name plate readings; name plate is located on the humidifier housing.
- g) Inspect installations for steam or air leaks while operating the VAPORMIST. Any leaks should be sealed.

MAINTENANCE

VAPORMIST®

Mineral Precipitate

As evaporation takes place in a standard VAPORMIST unit, the minerals dissolved in the water come out of solution and a portion of these minerals float on the water surface. If not removed, these minerals will eventually form a sludge and settle to the bottom of the evaporating chamber.

Cleaning once or twice a season is usually adequate, assuming the water has a hardness of up to 15 grains per gallon.

To dramatically reduce mineral accumulation inside the evaporating chamber use softened water for make-up water source. Using softened water will reduce cleaning frequency to once every several years in most cases.

Cleaning the Evaporating Chamber

The heating element itself is self cleaning. The mineral buildup on the element flakes off after reaching a thickness of about 1/16", and settles to the bottom of the chamber.

Note: Before this scale accumulation builds up to the underside of the heating element, it must be removed. Failure to do so may result in premature heater burn-out.

To Service:

1. **Shut off electrical power to the unit.** Using the key, unlock and remove the large front panel. Drain the evaporating chamber by manually opening the "DRAIN" valve. Open the lever on the valve to the "MANUAL" position and lock in place.
2. Disconnect the connector tube on top of the evaporating chamber, the flexible hose from the overflow pipe, and the flexible hose from the drain. Install a rubber plug into tank drain nipple. All plumbing connections should be removed from the evaporating chamber. **NOTE: DO NOT DISCONNECT THE FLEXIBLE ELECTRICAL POWER CONDUIT.**
3. Disconnect tank-grounding wire.
4. Slide the evaporating chamber out of the unit on the sliding track. Remove the cover of the chamber. (Covers on VM2-16 slide into holding slots, covers on VM21-34 need to simply be set aside.)
5. Remove the evaporating chamber, dump out mineral residue.

6. Unscrew the probe housing, and remove any mineral build-up accumulated in the housing.
7. Clean the probe-rod assembly. Scrape off build-up on rods, and brush with sand paper or steel wool off tips to remove mineral residue.
8. Replace chamber onto the sliding track.
9. Secure the chamber cover making sure the chamber is sealed. Push chamber back into the unit on the slide track.
10. Reconnect the tube and slip coupling, the overflow hose, the drain hose, and connect tank-grounding wire.
11. Move drain valve lever back to "AUTO" .
12. Replace the front panel and lock. Turn on the electric power. VAPORMIST is again ready to humidify.

Off Season Shut-Down

1. Switch off electrical power.
2. Shut off water supply to make-up valve.
3. Drain evaporation chamber, and clean if necessary (see "Cleaning the Evaporating Chamber" above).
4. Leave chamber dry, the power "OFF," and the water shutoff valve closed until the next humidification season.

VAPORMIST DI

The VAPORMIST DI unit uses DI/RO water. Because these water types are mineral-free, cleaning the evaporating chamber should not be necessary. However, there are some simple maintenance steps that should be followed to ensure all parts of the unit are in good working order.

To Service:

1. Shut off electric power.
2. Shut off water supply to make-up valve.
3. Unlock and remove front panel.
4. Make sure the evaporating chamber is drained by manually opening the drain valve.
5. Check the condition of the overflow and drain hoses.

MAINTENANCE

6. Remove the evaporating chamber as follows:
Disconnect the flexible connector tube on top of the evaporating chamber, the flexible overflow hose, and the flexible drain hose. All connections should be removed at the evaporating chamber. **DO NOT DISCONNECT ANY OF THE ELECTRICAL CONDUITS.**
7. Slide the evaporating chamber forward on the track. Remove the cover of the chamber. (Covers on VM2-16 slide into holding slots, covers on VM21-34 need to simply be set aside.)
8. Check operation of the float valve, inspect valve seat and heater cut-off.
9. Inspect the heating elements. Replace if inoperative.
10. Inspect the evaporating chamber. Clean if necessary.
11. Replace the chamber cover and slide chamber back into unit.

12. Reconnect connector tube and flexible hoses.
13. Return drain valve handle to closed position.
14. Replace front panel and turn on electric power.
15. VAPORMIST DI is again ready to humidify.

Off-Season Shut-Down Procedure

1. Switch off electric power.
2. Remove front panel.
3. Shut off water supply to make-up valve.
4. Drain evaporating chamber by manually opening the drain valve.
5. Replace front panel.
6. Leave chamber dry, power off, and water shut off valve closed until the next humidification season.

VAPORMIST® TROUBLE-SHOOTING GUIDE

PROBLEM	CONTROL PANEL LIGHTS			POSSIBLE CAUSE	RECOMMENDED ACTION
	FILL	READY WATER	DRAIN		
Humidifier will not heat	Off	Off	Off	Control transformer	Verify control voltage across secondary leads of transformer. Reset transformer circuit breaker.
	Off	On	Off	Humidistat is not calling	Set humidistat to call. Inspect for faulty humidistat.
				Safety controls open	Check safety controls, air flow switch, high limit humidistat, etc.
				Faulty control board	Verify control voltage between terminals H & N.
				Probe head deterioration*	Replace probe head.
Humidifier will not fill	On	Off	Off	No water pressure at valve.	Check water supply/shut off valves.
				Faulty water fill valve	Verify action of fill water solenoid valve by turning control module switch from standby to normal op. Audible click should be heard as solenoid operates.
				Plugged strainer	Check strainer.
				Plugged valve	Check valve.
				Faulty control board	Verify control voltage across terminals H & N.
Humidifier does not stop filling	On	Off	Off	Lack of tank to probes electrical continuity. Water conductivity 100 micromhos/cm (2 gr/gal) min.	Jumper wires brown to yellow. If water stops, verify tank ground; check water supply conductivity; then consult factory.
				Fill valve is stuck open	Check valve for foreign matter.
				Drain Valve not closed Fill valve installed backward	Check for correct water flow, through valve, note arrow.
	On	Off	On	Auto-drain mode	10 Minute must complete first.
Low output	Off	On	Off	Electric drain valve not seating	Correct cause of leakage or replace valve.
	Off	On	Off	Fill valve is stuck open	Check valve for foreign matter.
Unit short cycles	On & Off	On	Off	Probes may be incorrectly wired or need cleaning	Confirm that unit is wired per diagram. Clean probe rod tips with steel wool.
Reduced or no output even though water is at the proper level	Off	On	Off	Heater malfunctioning	Verify that proper voltage is being applied to heaters. Check heater (amp draw and compare to wiring diagram ratings.
				Malfunctioning control system	Heater contactor not functioning replace. Service fuses blown. Auxillary limit controls not allowing system to operate (dust humidistat, air flow proving switch, etc.). Reset, replace or calibrate as required. Faulty or inaccurate humidistat, replace or calibrate.

*Probe rod corrosion or probe head material aging may cause level control system failure. This generally does not occur in the first two years of operation.

VAPORMIST® DI TROUBLE-SHOOTING GUIDE

PROBLEM	READY WATER	POSSIBLE CAUSE	RECOMMENDED ACTION
Humidifier will not heat	Off	Control transformer	Verify control voltage across secondary leads of transformer. Reset transformer circuit breaker.
		Humidistat is not calling	Set humidistat to call. Inspect for faulty humidistat.
		Safety controls open	Check safety control. Air flow switch, high limit humidistat, etc.
		Low water float switch	Verify control voltage from float switch and transformer secondary common.
Humidifier will not fill	Off	No water pressure at valve	Check manual water supply. Valve, minimum 25 psi water pressure.
		Malfunctioning water float valve	Check to make sure that valve float & stem moves freely.
		Plugged float valve	Check float valve seat.
Water float valve does not close	On	Open drain valve	Obstruction in drain valve will not allow complete closure, clean or replace valve.
		Manual drain valve not closed	Close drain valve.
		Malfunctioning float valve	Float ball has water leak. Float valve seat defective, replace.
		Water passing into overflow stand pipe	Readjust float valve rod, so water level reaches 1/4-3/8" from over flow edge when water is at ambient or cold state. Excessive water pressure, 100 psi maximum.
		Float valve stuck	Obstruction will not allow float valve to seat properly, clean or replace with new seat.
Reduced or no output even though water is at the proper level	On	Heater malfunctioning	Verify that proper voltage is being applied to heaters. Check heaters (amp draw and compare to wire diagram ratings)
		Malfunctioning control system	Heater contactor not functioning, replace. Service fuses blown. Auxiliary limit controls not allowing system to operate (duct humidistat, air flow proving switch, etc.). Reset, replace or calibrate as required. Faulty or inaccurate humidistat, replace or calibrate.
		Time delay/interlock relays	On delay relay delay time 10-15 seconds. Check relays.
		Low water cut-off switch	Check for proper operation.

REPLACEMENT PARTS

Table 15-1: Space Distribution Unit (SDU)

No.	Description	Qty.	Part No.
1	Dispersion Chamber Weld, 1½"	1	160441
1	Dispersion Chamber Weld, 2"	1	160442
2	Protective Bumpers	4	310170
3	Door Weldment	2	160430-100
4	Lock, Cabinet Door	2	700700
5	Nut Retainer Assy, ¼" - 20	4	700650
6	Blower, 296/435 CFM	1	409540-001
7	Wall Bracket	1	160150-101
8	Plug, ¼" NPT Yellow Brass	1	203570

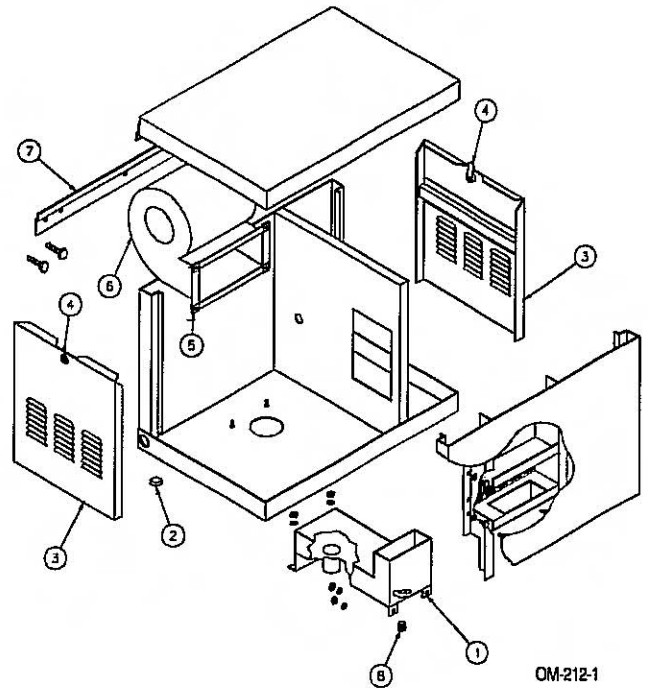
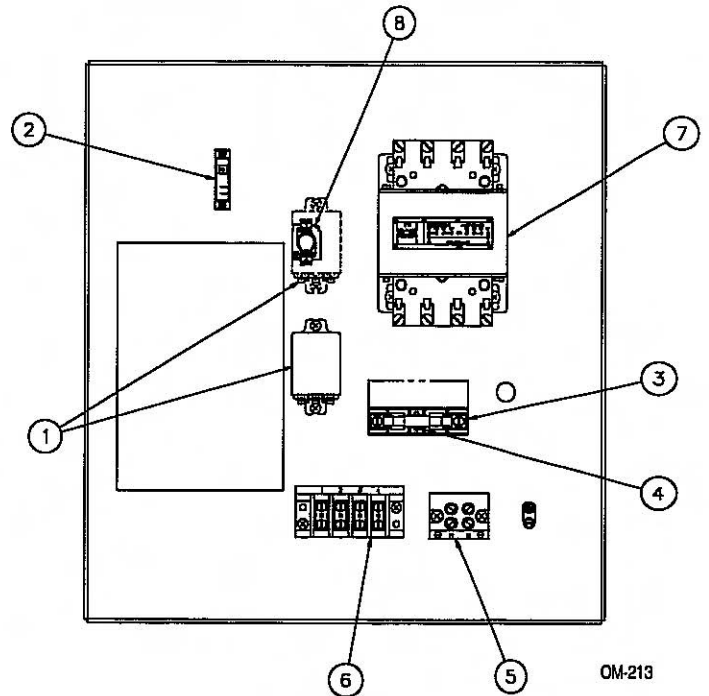


Table 15-2: SDU Subpanel

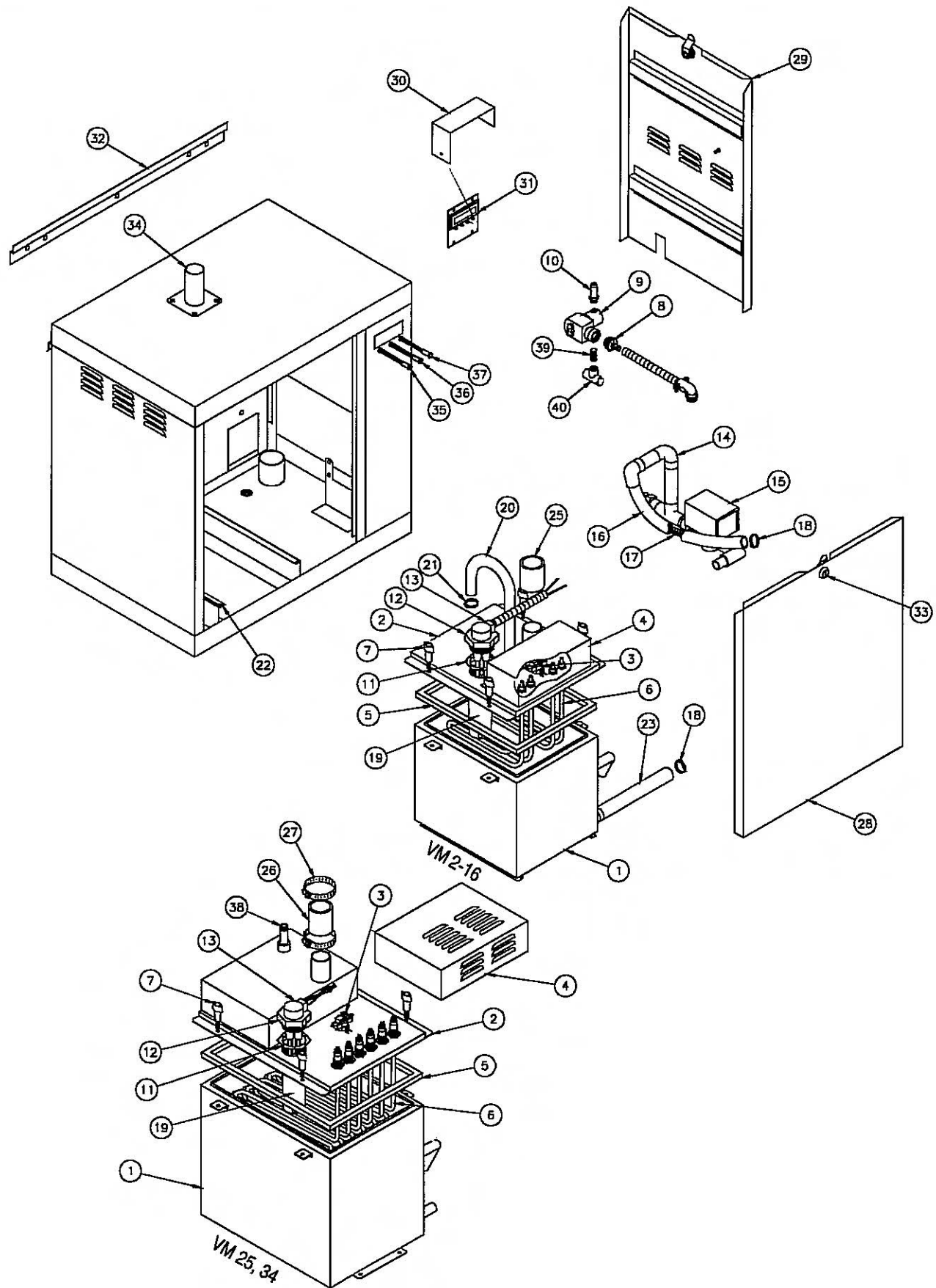
No.	Description	Qty.	Part No.
1	Relay, 2-Pole 24V	1	407900-001
2	Time delay 24V	1	408440-001
3	Fuse Holder, Single Pole	1*	407450-002
4	Fuse, 3 amp	1*	406740-006
5	Terminal Block, 2 pt pressure contact	1	408300-001
6	Terminal Block, 4 pt	1	408250-001
7	Transformer	1**	408991/408992
8	Relay, Thermostatic	1	409598

* With 480V or 575V, use quantity (2).

** Refer to individual order for correct selection.



REPLACEMENT PARTS



REPLACEMENT PARTS

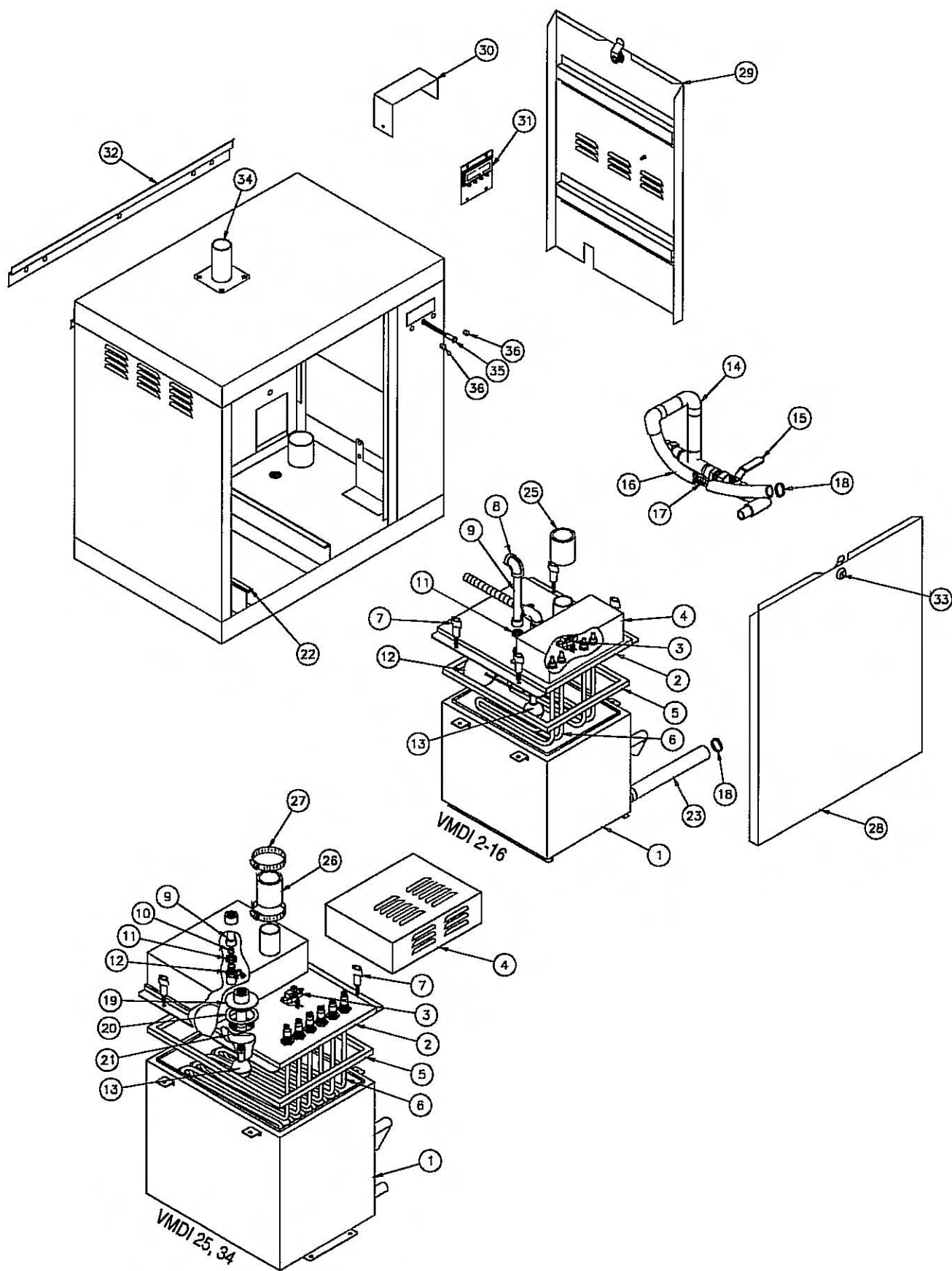
Table 17-1: VAPORMIST (see drawing on page 16)

No.	Description	Qty.	Part No.
1	Tank	1	160012*
2	Cover	1	*
3	Thermo Cut-Out	1	409560-001
4	Cover, Heater Terminal	1	160750*
5	Gasket, Cover	1	160695*
6	Heater	*	409600*
7	Knob, T-Handled Utility	4	700725
8	Connector, 3/8" flex.	1	407127-038
9	Valve, 1/4" Solenoid Fill	1	505084
10	Orifice, Fill Valve	1	160227*
11	Gasket, Probe	1	309750-003
12	Probe Assembly	1	*
13	Probe Plug Wire Assembly, 24"	1	406050*
14	Drain Assembly	1	180520*
15	Valve, 3/4" Electric Drain	1	505400-050
16	Hose, Overflow	ft*	307020-002
17	Spring, Overflow Hose	1	307025
18	Hose Clamp, 3/4" ID	4	700560-075
19	Probe Housing, Nylon	1	308500
20	Hose, 1/2" Fill (21" Long)	1.75 ft	307020-001
21	Hose Clamp, 1/2" ID	2	700560-050
22	Duro Strip, 11" Nylon	2	309980
23	Hose, Drain	ft*	307020-002
24	Stopper, Rubber (not shown)	1	309960
25	Slip Coupling with O-Rings, 1 1/2" (VM 2-16)	1	162726-001
26	Hose Cuff, 2" ID x 3" (VM 21-34)	1	305391-003
27	Hose Clamp, 2" ID (VM 21-34)	2	700560-200
28	Panel Weld, Front	1	160310-100
29	Cover Weld, Electrical	1	160320-100
30	Bracket, Electrical Cover Key Lock	1	120746
31	Display Board, LW440 (VL2)	1	408651
32	Wall Bracket	1	160150-101
33	Lock, Key	2	700700
34	Connector Weld	1**	160350*
35	Light, Amber (FILL)	1	409520-003
36	Light, Green (READY WATER)	1	409520-002
37	Light, Red (DRAIN)	1	409520-001
38	Nipple, 1/4" NPT x 2" (VM 21-34)	1	250210-002
39	Nipple, 1/4" NPT Brass Close (VM 2-16)	1	250013
40	Strainer, 1/4" NPT Sediment	1	300050

* Specify humidifier model and serial numbers when ordering.

** Shipped loose except with bonding bracket.

REPLACEMENT PARTS



REPLACEMENT PARTS

Table 19-1: VAPORMIST DI (see drawing on page 18)

No.	Description	Qty.	Part No.
1	Tank	1	160012*
2	Cover	1	*
3	Thermo Cut-Out	1	409560-001
4	Cover, Heater Terminal	1	160750*
5	Gasket, Cover	1	160695*
6	Heater	*	409600*
7	Knob, T-Handled Utility	4	700725
8	Elbow, ¼" 90° (VMDI 2-16)	1	200580
9	Pipe Weld, Fill Valve	1	*
10	Orifice, Fill Valve	1	160229*
11	Seal Ring, ¼" 18 NPT	1	306365
12	Float Valve Assembly	1	*
13	Float Switch, Stainless Steel LWCO	1	408420-001
14	Drain Assembly	1	180450*
15	Valve, ¾" Stainless Steel Ball	1	505000-001
16	Hose, Overflow	ft*	307020-002
17	Spring, Overflow Hose	1	307025
18	Hose Clamp, ¾" ID	4	700560-075
19	DI Conversion Weld, (VMDI 21, 34)	1	167786
20	Gasket, (VMDI 25, 34) Conversion Weld	1	160698
21	DI Housing, Nylon	1	167780
22	Duro Strip, 11" Nylon	2	309980
23	Hose, Drain	ft*	307020-002
24	Stopper, Rubber (not shown)	1	309960
25	Slip Coupling with O-Rings, 1½" (VMDI 2-16)	1	162726-001
26	Hose Cuff, 2" ID x 3" (VMDI 21-34)	1	305391-003
27	Hose Clamp, 2" ID (VMDI 21-34)	2	700560-200
28	Panel, Front Weld	1	160310-100
29	Cover, Electrical Weld	1	160320-100
30	Bracket, Electrical Cover Key Lock	1	120746
31	Display Board, LW440 (VL2)	1	408651
32	Wall Bracket	1	160150-101
33	Lock, Key	1	700700
34	Connector Weld	1**	160350*
35	Light, Green (READY WATER)	1	409520-002
36	Plug, VMDI Pilot Light Hole	2	409525

* Specify humidifier model and serial numbers when ordering.

** Shipped loose except with bonding bracket.

TWO-YEAR LIMITED WARRANTY

DRI-STEEM Humidifier Company ("DRI-STEEM") warrants to the original user that its products will be free from defects in materials and workmanship for a period of two (2) years after installation or twenty-seven (27) months from the date DRI-STEEM ships such product, whichever date is the earlier.

If any DRI-STEEM product is found to be defective in material or workmanship during the applicable warranty period, DRI-STEEM's entire liability, and the purchaser's sole and exclusive remedy, shall be the repair or replacement of the defective product, or the refund of the purchase price, at DRI-STEEM's election. DRI-STEEM shall not be liable for any costs or expenses, whether direct or indirect, associated with the installation, removal or re-installation of any defective product.

DRI-STEEM's limited warranty shall not be effective or actionable unless there is compliance with all installation and operating instructions furnished by DRI-STEEM, or if the products have been modified or altered without the written consent of DRI-STEEM, or if such products have been subject to accident, misuse, mishandling, tampering, negligence or improper maintenance. Any warranty claim must be submitted to DRI-STEEM in writing within the stated warranty period.

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By purchasing DRI-STEEM's products, the purchaser agrees to the terms and conditions of this limited warranty.

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HUMIDIFIER COMPANY



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