



UNISYS TECHNOLOGIES

Duct Mount
Atomizing/Evaporative Humidifier

DIGI MISTER[®] DM530/DM538
User Manual



If you have any questions about the installation and operation of your humidifier, please contact customer support:

US and Canada: 1-888-966-8074

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Web Site: www.Unisys-Technologies.com

READ AND SAVE THESE INSTRUCTIONS

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SAFETY DEFINITIONS AND PRECAUTIONS

SAFETY DEFINITIONS

These safety terms identify information you must read.

⚠ CAUTION:

Indicates a hazardous situation which, if not avoided, could cause bodily injury or property damage.

⚠ WARNING:

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

SAFETY PRECAUTIONS

Make sure you read and understand this manual carefully and completely before installing, using, or working with the Digi-Mister humidifier.

Installation and maintenance should be completed by qualified personnel.

⚠ WARNING: BODY INJURY HAZARD

Children should not operate this humidifier.

⚠ CAUTION: UV-C LIGHT HAZARD (DM538 ONLY)

Protect eyes from UV-C light (DM538 Only), disconnect power before servicing.

⚠ WARNING: ELECTROCUTION HAZARD

Can cause electrical shock or equipment damage. Disconnect HVAC equipment before beginning installation.

INTRODUCTION

Thank you for selecting the DIGI Mister® DM530/DM538 whole-house humidifier, crafted by Unisys Technologies LLC, for your comfort needs. Our patented humidifier boasts the following exceptional features:

- ✓ **Flexible capability.** By adjusting the inlet water pressure, changing the number of nozzles (1 to 5) and hot air temperature, this humidifier can be used for homes and offices of various sizes. It can also work with a variety of different types of furnaces.
- ✓ **Easy installation, operation, and maintenance.** This humidifier only needs a small cut-out on the supply duct for installation. Setting and adjusting parameters are simple. Nozzles can be tested before installation. An observation window enables real-time monitoring of water mist status during operation, and a "swing-out" design facilitates easy maintenance.
- ✓ **Water and electricity saving.** Utilizing normal pipe pressure, water is atomized into a fine mist within the duct, ensuring efficient evaporation without wastage. This eco-conscious approach guarantees minimal environmental impact.
- ✓ **Neutralize and remove odors (DM538 only).** The DM538 model is equipped with germicidal ultraviolet LED lamps, effectively neutralizing odor-causing bacteria and preventing mold accumulation on nearby evaporator or duct surfaces. Enjoy fresh, clean air free from unpleasant odors.

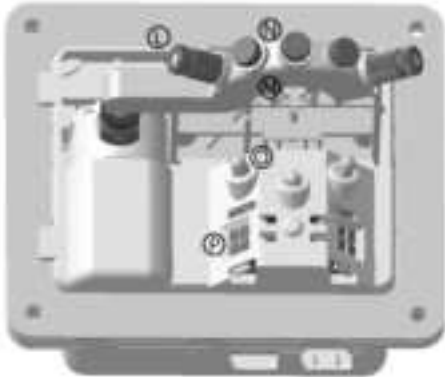
KNOW YOUR HUMIDIFIER

This new humidifier is installed to operate in conjunction with the forced-air heating, ventilating, air conditioning (HVAC) systems for residential houses or office buildings. Once the humidity is lower than desired and the hot air temperature rises to the pre-set point, the control board triggers a solenoid valve to open. This allows atomized water mist to be dispersed into the passing warm air via spray nozzles. You'll know the humidifier is in operation when both green LEDs above the display windows illuminate. A mini vibration motor on the spray nozzle bracket will be powered on for about two seconds to facilitate the formation of the fine water mist. The fine water mist will evaporate into the warm air and then be carried into your home by the furnace hot air flow.

PACKAGING CONTENT

No.	Name	Qty.	Picture
1	DM530/DM538 Humidifier	1	See below
2	Mounting Gasket	1	
3	Humidistat Wire Harness	1	
4	Spray Nozzles	7	
5	Spray Stoppers	5	
6	Water Pressure Regulator	1	
7	16-14 AWG Female 1/4"	2	
8	Mounting Screws	7	
9	Wire Clamp	1	
10	Spray Nozzle Tester	1	
11	Nozzle Clean Needle	1	
12	User Manual	1	

COMPONENTS



A. Observation Window	E. Humidity Display	I. Set/Test Button	M. Vibration Motor
B. Humidity Status LED	F. Air Temp. Display	J. Power Line Connector	N. Spray Stopper
C. Air Temp. Status LED	G. Lock Latch	K. Humidistat Connector	O. White LEDs
D. Push-in Connector	H. Up/Down Buttons	L. Spray Nozzles	P. UVC LEDs (DM538 Only)

SPECIFICATIONS

Model	DM530/DM538
Type of Unit	Atomizing/Evaporative
Install Position	Supply Duct
Power Supply	24 V~, 50/60Hz
Rated Power	DM530: 5.0Watt / DM538: 8.0Watt
Water Mist Rate	7 ~ 35Gal./Day (1.1 ~ 5.5 L/h) @ 60 psi
Unit Dimension	5.1 x 4.3 x 4.3 in. (130 x 110 x 110mm)
Duct Cut-Out Size	4 x 3.2 in. (102 x 81mm)
Shipping Weight	1.75 lbs. (0.8 kg)

INSTALLATION

MOUNTING LOCATION

There are many different furnace plenum and duct settings. As shown in Fig.1 ① the best mounting location is above the evaporate coil of an AC for a "T"-shaped supply duct. Other possible locations are showed in ② ~ ④. A good location allows installing as many as possible spray nozzles and all the water mist would not reach the duct walls. Please note:

- It's crucial to ensure that the temperature of the duct surface and hot air at the mounting location do not exceed 150°F (65°C). Otherwise, it could lead to damage or a reduced lifespan for the humidifiers. For older gas or wood-burning furnaces with high duct temperatures, mount the humidifier away from the burner.
- Allow adequate clearance in front of and above the humidifier so you can easily observe its working condition and perform maintenance and repair.

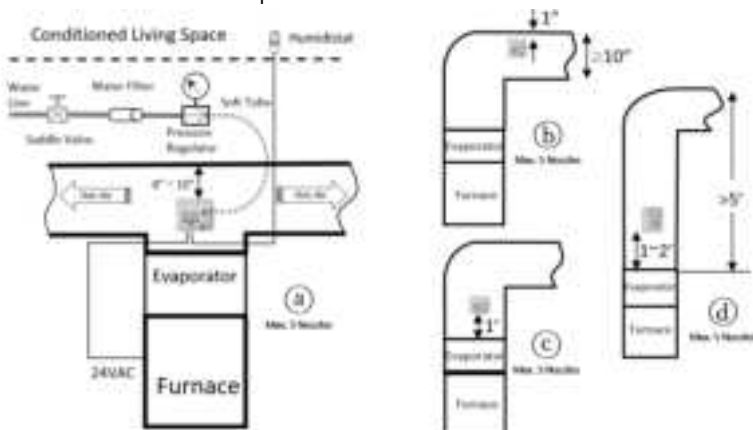


Fig. 1 Installation Locations

⚠ WARNING: WATER DAMAGE.

Do not install the humidifier where accidental overflow could cause damage to the home or properties. Dripping water can cause property damage.

⚠ WARNING: UV-C LIGHT HAZARD (DM538 ONLY).

Do not install the humidifier where the duct work is not totally closed. Do not install in an area near a vent or other opening through which the UV light is accessible, or completely close/disable them to prevent any potential UV light leakage. Leaking UV light is harmful to both skin and eyes. Avoid both direct and reflected exposure to UV light when the UV-C LEDs are powered on.

MOUNTING CUT-OUT

Locate the mounting gasket as a template, tape the template in position (Fig. 2) and trace around the inner square. Remove the template and carefully cut the rectangular opening. Finally, remove sharp edges and burrs.

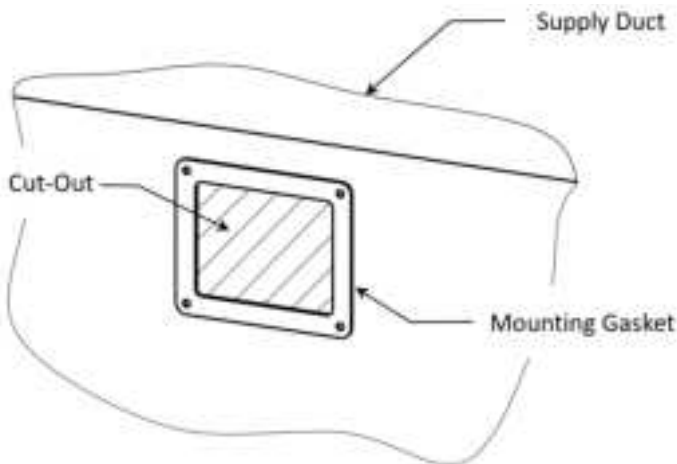


Fig. 2 Duct Mounting Cut-Out

⚠ CAUTION: SHARP EDGES

Carefully remove all sharp edges and burrs to prevent damage to the unit and injuring yourself.

MOUNT THE HUMIDIFIER

Remove the paper on the back side of the gasket and stick it to the position on the duct as shown in Fig. 2, or you can attach the gasket on the back side of the mounting frame of the humidifier.

With the spray nozzle bracket in rotating-out position, push and slide the humidifier unit from left to right into the cut-out opening so that the 2 tabs at the right side of the mounting frame are inside of the opening's edge (see Fig. 3). Fix the humidifier to the duct by using the 4 sheet metal screws provided in the box. Be careful not to strip the screw holes with excessively large torque.

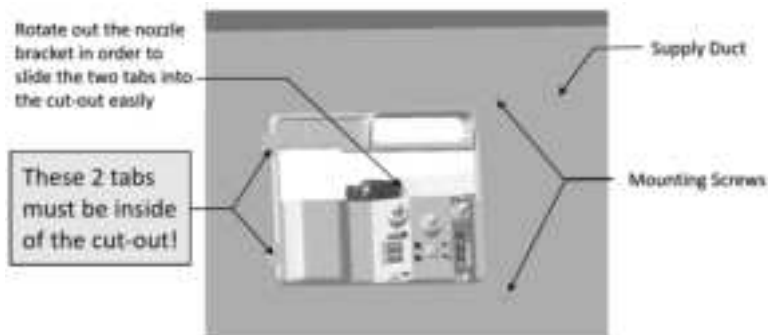


Fig 3. Inside View of Mounting Cut-Out

MAKE CONNECTIONS

ELECTRICAL WIRE CONNECTION

This humidifier is intended to be wired to the 24VAC secondary coil of a class II transformer whose primary coil should be connected to the 120V (HUM or EAC) terminals on a furnace main control board. Do not connect the humidifier directly to a 120VAC power line which will damage the unit instantly. The humidifier should only be powered on when both heater and blower of the furnace are turned on. Don't power the humidifier on permanently through a power outlet other than a furnace control board. To make sure that the humidifier has sufficient electric power, the transformer's rating should not be lower than 10 VA. Strip about 1/4" from 18 AWG wire ends and crimp them with the two female disconnectors provided in the box. Push the disconnectors firmly into the two male spade connectors at the bottom left of the unit. A standard electrical diagram is illustrated in Fig. 4. A class II transformer is

connected to the 120V HUM terminal on the furnace control board. 24VAC power will be applied to the humidifier whenever both burner and main air blower motor are in operation.

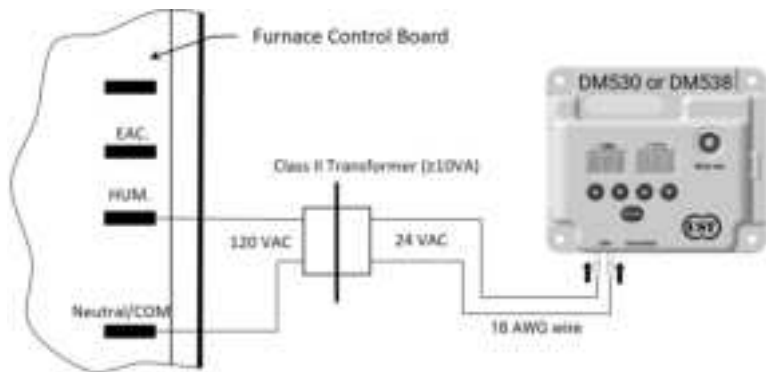


Fig. 4 Standard Electrical Wiring

Users of the DM538 humidifier, which has disinfection and purification functions using UVC LEDs, can choose to make the optional connection shown in Fig. 5. The primary side of transformer is connected to the 120V EAC terminal. In this way you can enjoy the benefits of healthy circulating air not only in winter but also in summer seasons. Since the UVC LEDs rely on the air flow for cooling down, the furnace blower motor must be running when the DM538 humidifier is powered on.

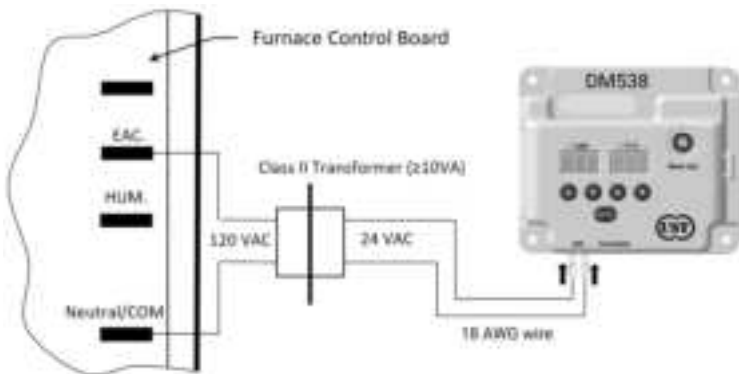


Fig 5. Optional Wiring for DM538 Model

Users can also power the DIGI MISTER® humidifiers up through a smart thermostat such as NEST or EcoBee if its 24VAC power source is rated above 0.5A. In this case the humidity must be set at a high level and the smart thermostat takes over the humidity control.

⚠ WARNING: ELECTROCUTION HAZARD.

Improper electrical wiring can cause personal injury or property damage. It is required by local codes that the unit be installed by a qualified HVAC technician or electrician. All wiring must be in accordance with NEC and existing local codes.

HUMIDISTAT CONNECTION

To get an accurate and stable humidity reading, it is recommended that the humidistat be located inside living space within 10 feet of the humidifier unit (see illustration in Fig. 1). The humidistat housing can be fixed on a wall or cabinet. Avoid direct sunshine or areas with abnormal humidity. Push the 3-way female connector into the male connector at the bottom of the humidifier. Please note:

- The sensor wires can be extended if necessary. Make sure that the wires are correctly and securely reconnected.
- The humidistat sensor can be located inside the returning duct if it is difficult to reach the living space. However, the digital sensor reading may fluctuate significantly at beginning of each running period due to air flow in the returning duct.

WATER LINE CONNECTION

Please refer to the illustrations in Fig. 1 ① for the water line connection. Install a 1/4" saddle valve (not provided) to a hot or cold-water line, connect an inline water filter (not provided) before connecting to the water pressure regulator provided. Users must preassemble the in/outlet connectors and the dial meter to the regulator body at first by using PTFE tape or pipe thread sealant to ensure leak-free connections.

A 1/4" outside diameter (O.D.) soft tube, such as a vinyl or thermoplastic polyurethane (TPU) tubing (working pressure > 80psi), must be used to connect the pressure regulator to the humidifier unit. Cut the tube so that it has extra 6" length and make a loop in front of the unit before pushing the end firmly into the push-to-connect fitting at the water inlet.

Install the water pressure regulator and the wire clamp by using the mounting screws provided in the package at left side of the humidifier. Fix the wires and soft tubing as illustrated in Fig. 6. In this way, users can rotate out the spray nozzle bracket of the humidifier easily without stretching or severely bending any wires or tubing. Please note:

- Ensure proper installation by observing the flow direction indicators on the saddle valve, water filter, and pressure regulator to prevent water leakage, malfunction, or component damage.
- It is crucial that a good polyphosphate filter be installed to minimize scale or sediment build-up of hard minerals onto plenum and duct surfaces and prevent nozzle clogs. For the households with well water or high degree of hard water a reverse osmosis (RO) system may be necessary.
- Consult local codes for proper plumbing.

After all the water lines are connected, turn the saddle valve on, check all the joints and around the body of humidifier for any water leaks.

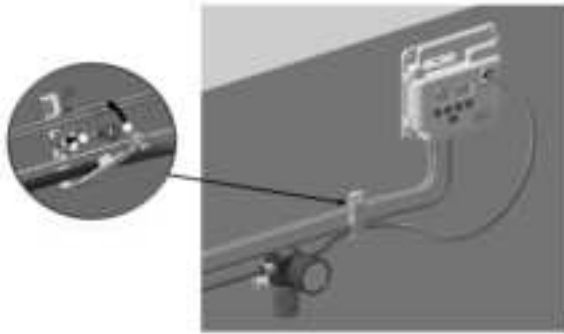


Fig. 6 Fix Wires and Soft Tubing

SET UP AND OPERATION

INLET WATER PRESSURE AND NUMBER OF SPRAY NOZZLES

Users of the DIGI MISTER® humidifier can adjust the sprayed water mist in two ways: by adjusting the inlet water pressure and by controlling the number of nozzles in use. Please note:

- the water pressure regulator can only reduce the water pressure to a lower point, cannot increase it above the supplied pressure (Pressure for residential water systems is normally 30~60 psi).
- Reducing water pressure decreases the stroke length and the quantity of water mist from each nozzle, improving the chances of full evaporation. Test data suggests that reducing water pressure from 60 to 30 psi decreases mist stroke length by 2 to 3 inches and reduces the sprayed water mist quantity by approximately 30%.

- In rural areas where the water pressure fluctuates a lot set the pressure to match or slightly below the lower pressure limit, so that the inlet water pressure will be consistently all the time.
- Do not reduce the water pressure below 30 psi since the water mist cannot be atomized adequately at such low pressure.

The fan-shaped arrangement of five spray nozzles ensures that atomized water mist is dispersed widely and evenly into the duct. This facilitates quick and effective evaporation in the hot air.

Before installation, it's essential to check each nozzle using the provided nozzle tester (see Fig. 10) to make sure it sprays consistently fog-like fine water mist. Users can install between one to five spray nozzles on the humidifier, depending on the size of the furnace and supply ducts. The capacity ranges from 7 gallons per day (one nozzle) to 35 gallons per day (five nozzles), operating at 60 psi.

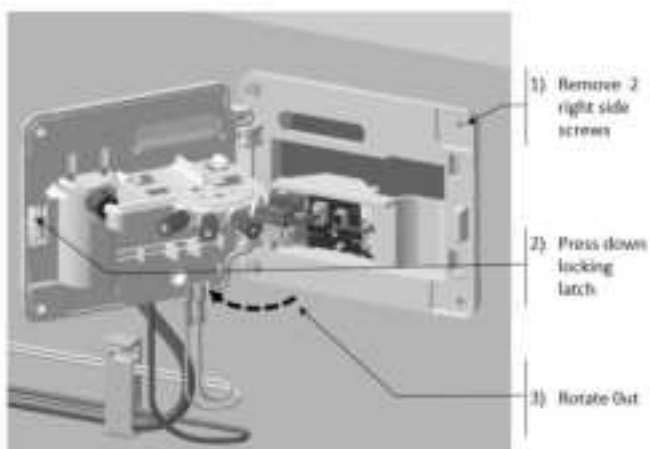


Fig. 7 Swing -Out Spray Nozzle Bracket

To access the nozzles, remove the two mounting screws on the right side of the unit, then press down the locking latch and rotate the spray bracket out, as illustrated in Fig. 7. Nozzles or stoppers can be installed or uninstalled by turning clockwise or counterclockwise with fingers. To avoid damaging the threads, do not use excessive force.

⚠ WARNING: UV-C LIGHT HAZARD (DM538 ONLY).

Disconnect the 24VAC power before opening the spray bracket. Leaking UV-C light is potentially harmful to both skin and eyes.

Following three key factors will determine the appropriate water pressure setting and the number of nozzles to be installed. The recommended strategy is to begin with a lower pressure setting and a smaller number of nozzles. If the water mist can be fully evaporated, gradually increase the pressure or add more nozzles as needed:

1) Housing or building size

The table below shows the approximate number of nozzles vs. the square feet of the conditioned space as a guide.

Square footage	1000~2000	1500~2500	2000~3000	2500~3500
Spray Nozzles @ 60 psi	1~2	2~3	3~4	4~5

2) Dimensional limitation of the plenum or duct

Fig. 8 displays recommended nozzle arrangements for various plenum or duct sizes (height $\geq 10''$). Restricting the number of nozzles ensures mist evaporates before reaching the duct wall.

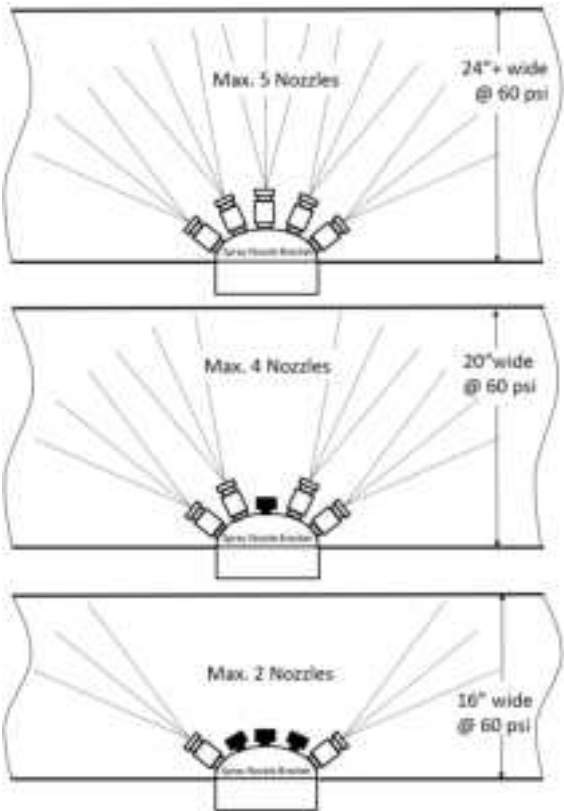


Fig. 8 Duct Width and Number of Nozzles @ 60 psi

3) Evaporating status of water mist

Water mist evaporation depends on air temperature, water mist hanging time in hot air, and air movement speed, which can vary based on furnace type. Multistage furnaces or heat pumps typically have lower hot air temperature and slower blower speeds, making evaporation more challenging.

Users can monitor water mist status through the observation window, as shown in Fig. 9, ensuring even dispersion and evaporation. Check for wet spots or puddles, especially within 2-3 ft downstream from the nozzles. If plenum or duct surfaces remain dry and desired humidity isn't reached, gradually increase water pressure or add nozzles. Regularly check for puddles or drips to prevent water damage to the furnace and property.

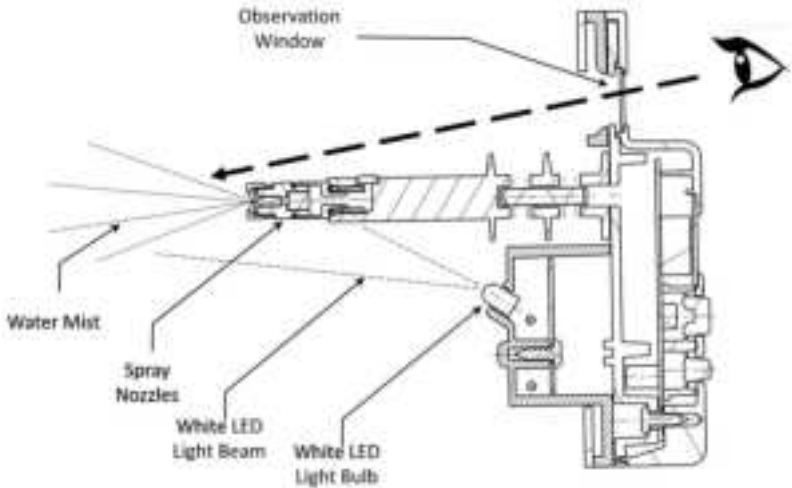


Fig. 9 Check Evaporating Status Through the Observation Window

⚠ WARNING: UV-C LIGHT HAZARD (DM538 ONLY).

Do not look at the water mist from locations other than the observation window since UV-C light from DM538 humidifier can cause skin and eye damage.

HUMIDITY AND HOT AIR TEMPERATURE SETTING

To turn on the humidifier, adjust the house thermostat to start furnace operation. The humidifier powers up when the main blower circulates

air and burner turns on. The display window shows current humidity level (blue number on the left) and hot air temperature (red number on the right). By default settings, the humidifier starts to spray water mist if the relative humidity (RH) below 50% and the hot air temperature above 110°F (43°C). Users can adjust settings based on individual preferences using the following instructions:

- Press the "Set/Test" button once to enter humidity setting mode. A desired humidity value will be shown in the display. Users can press "▲" or "▼" buttons below the humidity display window to change it. After five seconds the room humidity level will reappear on the display and the set value will be saved.
- Press the "Set/Test" button twice to enter hot air temperature setting mode. A pre-set temperature value will be shown in the display window. Press "▲" or "▼" buttons below the window to adjust the value. After five seconds the current hot air temperature will reappear on the display and the set value will be saved.
- Press the "Set/Test" button three times to enter testing mode, activating the solenoid valve and spraying water mist for ten seconds. Press the button again within 10 seconds to stop the test spray and resume normal operation. This feature allows testing of the spray nozzle operation while bypassing humidity and hot air temperature checking.

Additionally, there are two more settings which can help run the humidifier more precisely and conveniently.

- Press the "▲" and "▼" buttons below the humidity window simultaneously to enter humidity value calibration mode. This is useful when the humidity reading is off a little bit from actual humidity. The adjustment value can be -10% to +10% RH.
- Press the "▲" and "▼" buttons below the temperature window simultaneously to switch the temperature unit between Fahrenheit (°F) and Celsius (°C).

All the setting values will be saved in memory permanently until a future change, even when the humidifier is powered off.

The recommended settings of relative humidity levels versus outside air temperature are outlined in the table below. These settings strike a balance between RH levels optimal for comfort and humidity levels suitable for home protection, while preventing excessive condensation on windows.

Outside Temperature	Recommended RH Setting
+40° F(+4° C)	45%
+30° F(-1° C)	40%
+20° F(-7° C)	35%
+10° F(-12° C)	30%
0° F(-18° C)	25%
-10° F(-23° C)	20%
-20° F(-29° C)	15%

Proper hot air temperature is crucial for water mist evaporation in the plenum or duct. The recommended setting range is 100 to 120°F (38 to 49°C). Higher hot air temperatures could facilitate quick and effective water mist evaporation. However, achieving higher temperatures may prolong the time required, potentially reducing water mist spray time during each heating operation period.

As long as the duct surface and hot air temperature remain below the afore mentioned limit (150°F or 65°C), the humidifier can be mounted close to the heat exchanger, such as directly above the evaporator of an air conditioner, the temperature can be set higher. It's worth noting that the hot air temperature in single-stage furnaces typically exceeds that of multistage furnaces and heat pumps.

MAINTENANCE

Proper maintenance and cleaning ensure the humidifier provides years of dependable, trouble-free, and efficient service. A critical component is the specially designed spray nozzles, engineered to generate fog-like fine mist even at low water pressure (refer to nozzle assembly and tester in Fig. 10).

Before installation, carefully check all nozzles using the provided nozzle tester, regardless of whether they are new or used. Due to their small components and tiny orifice holes (0.1mm), any contamination, debris,

or build-up during production, transportation, or operation could adversely affect their performance.

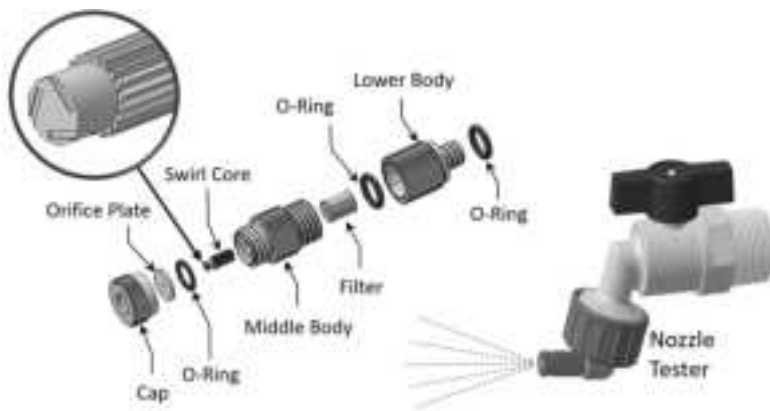


Fig. 10 Spray Nozzle Assembly

Follow these simple steps to check each nozzle:

- Install the nozzle tester on a $\frac{3}{4}$ " faucet or garden hose
- Tighten a nozzle on the tester by turning it clock-wise
- Turn on the water to check the status of the water mist. A back light or flash light can help to see the water mist clearly.
- If the water spray has following symptoms:
 - Abnormally split spray pattern
 - Asymmetric spray pattern
 - Constant solid water stream
 - Absence of water spray

Remove the nozzle cap and the white orifice plate, clean them if any debris or build-up is present. Insert the provided clean needle from back side of the orifice hole, pushing it several times to ensure the hole is smooth and clear. For used and dirty nozzles, disassemble all components, soak in white vinegar or other scale remover product for about 30 minutes and clean them as necessary. Reassemble and test the nozzle again. If the issue persists, repeat the process.

- If the nozzle sprays fine mist with an evenly spread-out pattern consistently, it is ready to be installed on the humidifier.

After installing the tested nozzles on the humidifier, check through the observation window (FIG. 9) to verify that all the nozzles are still spraying a fine mist. During the heating season, inspect the water inlet pressure and mist status of each nozzle weekly, ensuring there are no water puddles or drips inside or outside the plenum or duct.

Please don't use any other type nozzles on the DIGI Mister® humidifiers to avoid poor evaporation or water damage.

At the end of each heating season, it is strongly recommended to perform the following steps:

- 1) Disconnect the 24VAC power from the furnace
- 2) Turn the water saddle valve off
- 3) Remove the water filter from the water line
- 4) Allow the water in the pressure regulator, soft tubing, and humidifier to run out, or blow out using compressed air.
- 5) Replace all spray nozzles by using spray stoppers to seal the spray bracket water way
- 6) If necessary, remove the humidifier and clean the surfaces inside the duct, especially the observation window lens, white LEDs and UVC LEDs.
- 7) Clean and dry all the nozzles and store them in a bag.

The user of DM538 humidifier can keep the electrical connection shown in Fig. 5 so that the unit still has disinfection and purification functions of UVC LEDs during the summer season when the AC is running.

Install a new water filter and fresh tested spray nozzles at the start of each new heating season.

Question and Customer Support

US and Canada: 1 888 966 8074

E-mail: CustomerSupport@Unisys-Technologies.com

Web Site: www.Unisys-Technologies.com

WARRANTY

Unisys Technologies LLC provides a two-year warranty from the purchase date for all new DIGI MISTER® humidifiers bought from us or authorized sellers. This warranty covers defects in material and workmanship under normal, non-commercial use and services. All components are included in this warranty, except expendable items like spray nozzles.

Unisys Technologies LLC will repair or replace this product or any parts of the product to be defective during the warranty periods. Replacement will be made with a new or remanufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal or greater value.

Please submit it online at www.unisys-technologies.com/product-warranty to activate your warranty. Also keep the original sales receipt of an authorized seller by Unisys Technologies LLC, as dated proof of purchase is required to obtain the warranty. This warranty is valid for the original purchaser from the date of initial retail purchase and is not transferable. In no event shall liability exceed the purchase price paid by the purchaser of the product. Under no circumstances shall there be liability for any loss direct, indirect, incidental, or consequential damage arising out of, or in connection with the use of this product.

We are not responsible for damages from the use of water softeners or treatments, chemicals, or descaling materials. This warranty does not cover parts installed by unlicensed HVAC or electrical contractors. This warranty does not cover parts damaged as a result of misuse, abuse, use on improper voltage or current, or any use other than its intended use, accident, or from improper operation, maintenance, installation, modification, or adjustments. Further, the warranty does not cover acts of God, such as fire, flood, hurricanes, or tornadoes.

UNISYS TECHNOLOGIES LLC SHALL NOT, UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, REVENUE OR BUSINESS) OR DAMAGE OR INJURY TO PERSONS OR PROPERTY IN ANY WAY RELATED TO THE MANUFACTURER OR THE USE OF ITS PRODUCTS. The exclusion applies regardless of whether such damages are sought based on breach of warranty, breach of contract, negligence, strict liability in tort, or any other theory, even if Unisys Technologies LLC has notice of the possibility of such damage.

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

FREQUENTLY ASKED QUESTIONS

What factors must be considered for the mounting location of the humidifier?

When considering the mounting location of a humidifier, several factors need to be taken into account to ensure optimal performance and efficiency. These factors include:

1. **Temperature:** The hot air temperature must fall within the range of 100°F to 150°F. This temperature range ensures that the water mist can evaporate efficiently without being too low to cause slow evaporation or too high to potentially damage the humidifier.
2. **Hanging time in the air:** Placing the humidifier where the mist can hang in the air for as long as possible ensures maximum evaporation efficiency. It is essential to avoiding locations where the mist may come into contact with duct walls or other surfaces, which can lead to water puddles and leakages.
3. **Number of nozzles:** An ideal mounting location should accommodate the installation of a sufficient number of nozzles (maximum of 5). The best location for mounting is typically at a "T-section" above the AC coil in the furnace plenum. If mounted on a horizontal duct with at least 10" height, the number of nozzles will be limited by the duct width as explained in Fig. 8 of the user manual.

What should I do before installing new or used nozzles on the humidifier?

The nozzles of DIGI MISTER® humidifiers are specially designed to be used for low pressure applications. They have a tiny orifice hole (0.1mm) and several small components which must work together perfectly to form a fine fog-like mist at low water pressure (30 to 60psi). All the nozzles, no matter new or used, must be checked and cleaned by using the provided nozzle tester before installed on the humidifiers. Follow the instructions in the user manual step-by-step to test and clean each nozzle.

What if the nozzles spray fine mist, but there are still wet spot or water puddles in the duct?

First of all, you should check if the water mist consistently hits the plenum or duct wall due to the dimensional limitation. Water mist can evaporate quickly only when it is hanging in the air. Rearrange or reduce the number of nozzles, or decrease the water inlet pressure if necessary. You can also try to increase the triggering hot air temperature or increase the draft motor speed for quicker evaporation.

Why doesn't my humidifier power up?

The DIGI MISTER® humidifier can be powered up by a 24V transformer, whose primary coil is linked to the 120V HUM or EAC terminal on the furnace control board. For some furnaces, you can connect it to the dedicated humidifier terminal (24-VAC 0.5 AMP MAX) directly without a transformer. You can use a multimeter to measure the voltage at the humidifier to verify if it receives 24V power. Don't connect it to any other 24V terminals on the control board. If you are not sure about the electrical connection, please consult a professional HAVC technician, or contact us by phone call, message, or email. We will help you to resolve the issues.

How can I set up my humidifier for my multi-stage furnace with a variable speed blower?

In general, the multi-stage furnaces equipped with a variable speed blower, such as an ECM motor, will run in a slow motor speed and a relatively low hot air temperature. Due to low hot air temperature and slow air movement, you can use a few spray nozzles (like 1 or 2) first to check if the water mist can evaporate fully, only increase nozzles if there is no water leaks or puddles. You may get enough humidity with fewer nozzles because this type of furnace is usually running at lower stage with long period time or almost constantly on.

Can I use a smart thermostat with a humidistat to control the DIGI MISTER® humidifier?

Yes, you can use a smart furnace thermostat with 2-wire accessory to control the DIGI MISTER® humidifier. If you use the humidity control function of a Nest or EcoBee thermostat which could support one 1-wire ACC to power up the humidifier, make sure to select "Hum.+Heat" for activate and set a high target humidity level on the humidifier. In this way the humidifier will be powered on when the smart thermostat calls for humidity and for heat. However, you must set the hot air temperature above 100°F so that the water mist can be sprayed and fully evaporated when the air temperature in the duct reaches the setting point.

Can I connect the DIGI MISTER® humidifier to a permanent 24VAC power source?

No, it is not recommended to connect the humidifier to a permanent 24VAC power source. The humidifier is designed to operate in conjunction with forced-air furnaces and is intended to turn on and off together with the furnace. This ensures that certain electric components, such as temperature sensors, white LEDs, and UVC LEDs, can function properly over an extended period. Furthermore, for the DM538 model, moving air from the furnace is required to prevent the UVC LEDs from overheating. Connecting the humidifier to a permanent power source may lead to issues with component longevity and functionality, as well as potential safety concerns.