

# DehuKing Greenhouse Dehumidification Plus Heat Air Handler Manual

Model DUK1200/6T-1

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## **PLEASE READ THIS MANUAL BEFORE POWER UP**

This air handler is built using nothing but stainless steel. Stainless steel is very durable and takes little care. This unit is a non-refrigerated air handler. The water for the system should be treated with a glycol or antifreeze mixture to prevent freezing when ambient temperatures drop below freezing. The ratio added must be according to the antifreeze manufactures' recommendations. Antifreeze should have inhibitors and other anti-corrosion additives. This manual will assist you in maintaining your new air handler from CHILLKING®. Chilling is a Texas-based company located eight miles north of Bastrop and forty miles east of Austin, Texas.



### **IMPORTANT!**

**This unit does not need to be opened for installation.**

**It should only be opened when there is a need for servicing.**

## Location of Air Handler

It is important when choosing a location to account for the needs and maintenance of your new air handler. There is a chilled water line and a return line that must be plumbed to the air handler. This particular model also has a hot water heat exchanger that must also be plumbed. The electrical box is located inside the cabinet behind the front panel. The voltage is marked on the ETL mark on the outside corner of the cabinet. There is also a drain that must be plumbed, it is also marked and shipped to you with a pope plug in the end. The filter access is on the grill side of the air handler. You must consider all obstacles and needs when locating your unit.

**Clearance:** Intake side requires 30" minimum clearance. Front side needs 30" clearance. Side with no plumbing 2". Top requires non touching clearance of 1". Plumbing end should be as needed for plumbing and future service. Remember to never sit things atop the air handler. Water trapped between stainless and other metals or materials can cause corrosion of the stainless steel.

## Leg Adjustment & Leveling

It is important that your air handler be installed level. If your model has legs, the legs of your air handler are adjustable. A 1/2" open end wrench can be used when adjusting the legs if hand adjustment is too difficult. The legs can be adjusted for height. Your air handler can be adjusted up to 2" to acquire level.

**Leveling:** Use a 2' or a 3' level placed across the width of the air handler and place a 2' to 3' level from front to back. Adjust the length of the legs to the desired height and level. A very slight lean of 1/8" is desirable with the outlet for the condensate pan being the lowest point. Once the unit is level, adjust the two legs on the same end as the drain outlet, turn them in 1/8" to shorten the height of the cabinet by that amount. This makes the condensate drain from the unit. If wanted, the cabinet can lean 1/4" for drain purposes. Most people cannot see this slight lean.



## Hanging

Most owners of this model air handler will suspend or “hang” the air handler from a joist or upper beam. It’s import to check the weight specification and divide by four to determine weight at each hang point. Your air handler is shipped with feet attached to the air handler. These feet can be used to hang the unit or to secure it to a floor or table mount.

**CAUTION! PLEASE READ: DO NOT RELOCATE FEET TO ANOTHER PART OF THE AIR HANDLER.** The feet of the air handler are located where heavy duty threaded nuts are used. This not only holds the panel in place but also suspends the entire unit. Please use care not to strip out the bolts when tightening. It is wise to use either Teflon tape of a type of permanent thread lubricant because stainless steel is easy to over-torque.



## Water Lines In and Out

The water lines are marked in and out. The copper lines\* used for plumbing the coils inside the units are 1”. On the supply side there is an unseen “flow balancer” inside the lines to the condensers. This insures that all condensers get an even amount of water. “In” is for the chilled water/anti-freeze incoming from the chiller and “out” is for the heat absorbed coolant to return to the chiller or cooling tower. The piping inside the cabinet is all copper and welded with high-grade silver solder. Plumbing to the cabinet can be of any materials approved by the local building code.

\*Lines-standard size is 1” sweat. Air handler can be ordered with various sizes of copper fittings, male, female, or pipe sweat.



## Drain Line

The Heat Exchanger (HX or HEX) is mounted slightly above a stainless steel drain pan. This drain pan is plumbed to exit the air handler. A drain line of 3/4" must be attached to the air handler's drain fitting on the outside of the unit. Located on the same side as the water lines is a drain fitting. It is shipped with a plug in the end of the pipe. This is to prevent insects and other pests from entering the air handler. This plug must be removed to plumb the drain line for the unit. It is important that the air handler is leveled when first setting up. If it hasn't been properly leveled it should be leveled now. Refer to the leveling section of this manual.



## Electrical

There is a water-tight electrical box located inside of the cabinet. It is a vertical panel inside the front cover and on the right side after removing the front cover that has louvers. This box is for power into the unit. Most owners "hard wire" the electrical for their air handlers. While some use a cord with the proper plug on the end. Any choice must be according to local electrical codes. A licensed electrician should be used for all electrical work. The voltage is located on the ETL sticker on the outside of the cabinet.

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## Air Filters

The air filter slide mounts are located at the air intake or rear of air handler. Just slide the filter out. Air handlers are shipped with washable filters that will last ten years if cared for. If you choose to replace the filter replace with the same size filter. Either a single 20" x 28" air filter or two 20" x 14" air filters can be used. We recommend inspecting the filter at least once a month to determine if it needs to be replaced. A dirty filter will block airflow and reduce the efficiency of your unit.



## Temperature Controller

The temperature controller mounts to the unit via a base plate on the side of the air handler. Before using, remove the protective film covering the screen by pulling the red tab.



## About the Fans

These particular Chilling air handlers use a forward blade fan. The fan blade in proper rotation will flow the air forward. They are designed to consume minimum power while producing minimum noise and delivering maximum airflow. An example is the 115 VAC fan. It delivers 1,200 CFM while using very little energy. Drawing .85 amps at 60Hz. The noise level rating is 71 dB. (Less than one amp used)

## Warranty

Warranty is 1 year for all parts.

## Dimensions

The outside dimensions are: 29-1/2" wide, 31-3/4" deep, 23-1/8" high  
Model number DehuKing Air Handler # DUK1200/6T-1

