

## Note: Warranty Coverage Information Begins with:

### Humidity, Room and Pool Water Temperature Settings

Pool Temperature 80 to 84 degrees F [recommended]

Room Temperature 82 to 86 F [recommended]

**Humidity 60% during warmer months, 50% in the colder months at customer discretion.**

**IMPORTANT:** WITHOUT A POOL COVER, the thermostat can be programmed to maintain a temperature of 82 degrees in the winter and 84 in the summer- [in all programmable time settings] The mode selection should always remain in the AUTO mode. The air temperature must be maintained at 2 degrees above pool temperature at all times without a cover.

WITH A POOL COVER, the room temperature can be set to any desired setting but before removing the cover, the room temperature should be at or above the pool temperature or the existing design parameter set forth in your proposal.

**NOTE:** The humidity setting should NEVER be set below 50%RH.

The unit is sized to maintain a 50 to 60 percent relative humidity envelope. Setting the Humidistat below 50% to lower the humidity is not achievable since the evaporation rate accelerates as the humidity drops. As a result the unit runs continuously using excessive energy with no benefits. Once a comfortable setting has been achieved, the room will take time to balance and the controls should not be altered. Never turn the room temperature below the water temperature unless a pool cover is in place.

Never set the humidistat above 60% or below 50%.

In warm weather, opening the doors/windows and airing out the pool enclosure is always beneficial as well as economical. When doing so, be sure to turn both the thermostat and Humidistat to the OFF position first.

If client fails to follow and/or maintain the ASHRAE, SPS Manual guidelines for air and water temperatures; we will not be held responsible for problems associated with high levels of uncontrolled humidity within the structure. If client or end user fails to provide accurate information to DXair for designing the system; and temperatures are found to be outside of the Design Guidelines, we take no responsibility for the problems that may be caused by operating outside of the design parameters for indoor pools. All of this information is available to any customer on a free basis at our website [www.DXair.com](http://www.DXair.com) under Design Guidelines.

# CHLORINE, SALT, BROMINE POOL CHEMISTRY & BALANCING

## You should not be able to smell chlorine when you walk into your pool room.

It means the pool is not balanced properly. It is the responsibility of each end user/owner/client to be trained in proper pool chemistry and staff that maintain your indoor pool in the balancing of pool water/other water sources and procedures. DXair, nor any mechanical contractor, will be held responsible or warranty for problems associated with deterioration of equipment and peripherals due to corrosion and improper pool chemistry. All warranties are void when pool chemistry has deteriorated any component or equipment installed.

When pool water chemistry (salt, chlorine, bromine, etc.), is properly balanced- it will remain free of odor and protect bathers from bacteria and germs. Chlorine, the primary pool treatment process, kills germs and destroys harmful organic contaminants introduced into the water by bathers. Chloramines are formed in pools when chlorine molecules attach to ammonia and other organic by-products of the human body. Pool operators have traditionally controlled waterborne bacteria chemically with chlorine, meaning that the gaseous chlorine-based by-product (chloramines) can linger and re-circulate through the HVAC dehumidification system causing damage to components, wiring, contactors, relays compressors, and other building components, etc. Although conventional mechanical fabric media filters on the dehumidification systems can trap airborne particulates, gases such as chloramines are not captured.

- Improperly balanced pool water chemistry can attack the indoor pool's HVAC system the building's structural components and anything metal in a pool room. When the water is not properly balanced this becomes a highly corrosive and unhealthy environment. You may need to test your city or other water that is used in the pool room as there may be contaminants that affect your pool chemistry. Test your water sources and test them often! Corrosion and the "stink" of chlorine is the first sign of poor pool chemistry.
- Equipment will show signs of discoloration, corrosion, rust to copper or other internal piping. Leaks may develop in coils... again this is due to poor pool y chemistry/water quality. This is not a manufacturer or installation problem. Warranty may be voided.
- Combined chlorine compounds cause eye irritation and the so-called "chlorine odor" that swimmers often complain about.
- Free chlorine in water, under normal concentration, has no discernible odor.
- A dehumidification system will remove the excess moisture from the pool enclosure but will not eliminate the harmful chlorine compounds that cause the chlorine odor and metal corrosion. Dehumidification systems do not cause the chloramine problem; therefore, a dehumidification system cannot resolve this issue.
- Many companies including ASHRAE HVAC Applications Manuals do however, recommend moving some air across the open body of water and installing the system's return air at the deck level to assist in removal of chloramines. Keep in mind that doing so can increase evaporation rate by as much as 30% depending upon how much air flow is moving across this body of water. It can also create a chill effect on the patrons using the pool. Discuss all options with your architect, mechanical engineering firm, or mechanical contractor

while in your design stages as retrofitting these applications can become difficult. Review all ASHRAE HVAC Applications Manuals with your architectural and engineering team to determine the best approach for your facility. The ASHRAE Manuals can provide some insight as to handling the chloramine issues with an exhaust type system at the pool level.

- For all practical purposes, learning to balance the pool chemistry properly and good air flow within the structure can and will serve to help with the chlorine issues.
- Only a comprehensive pool water chemistry program and continuous monitoring will keep your pool crystal clear and odor free.
- Chloramines condense along with moisture from the pool on cold surfaces forming a corrosive chloride-rich solution.
- The chloride solution forms a harmful substance that will corrode metals, including stainless steel, where it forms a particularly serious stresscorrosion-cracking problem.
- The chloramines in the air can cause significant damage to metal surfaces, such as windows, doors and frames, ladders, ductwork, pool heaters, & HVAC equipment.
- The higher the concentration of chloramines in the air, the more corrosive the condensate.
- Air Turnover rates, outside air, and properly designed duct work/air delivery systems can help but they cannot remove contaminants. Chloramines are almost like a "sticky substance" -- they have to be washed off when continual off-gassing of pools occur. This is a water quality issue first, and becomes an air quality issue when not properly controlled at the source.
- DXAIR recommends that once the pool is established, all staff should be trained by the pool company in managing these areas.
- Do **NOT** store chemicals or pool equipment in the mechanical space. Your pool equipment and chemicals must be maintained separately from the dehumidification system due the corrosive nature of chemicals and leaking pool equipment in this space.
- Do **NOT** leave the mechanical room open to the pool room. A door should be installed between mechanical space and pool room environment to prevent chlorinated air travelling into areas such as mechanical spaces or other spaces of offices/buildings/homes.
- Some indications of poor pool chemistry is rust, corrosion, discoloration of any metal, leaking coils in a dehumidifier, and component replacement due to deterioration.

## NEGATIVE PRESSURE


ASHRAE 2019 HVAC APPLICATIONS MANUAL states:


“Pool and spa areas should be maintained at a negative pressure of 0.05 to 0.15 in. of water relative to adjacent areas of the building to prevent moisture and chloramines odor migration. Active methods of pressure control may prove more effective than static balancing and may be necessary where outdoor air is used as part of an active humidity control strategy. Openings from the pool to other areas should be minimized and controlled. Passageways should be equipped with doors with automatic closers and sweeps to inhibit migration of moisture and air.”


“The balance between ventilation air and exhaust air must be controlled at all times. A pool room space must always be maintained with a negative pressure to prevent moisture and odors from migrating to other parts of the building. A positively pressured indoor pool can accelerate building damage by pushing the high moisture content air into the building envelope. Note that a significant negative space pressure will not reduce or affect vapor migration to the outdoors in winter.”


Secondly, humidity is nature's water pump where moisture tends to “pressurize” into walls and ceiling in pool environments. You may see drywall sagging or wet, ceiling tiles falling down, ceilings caving in, etc. due to moisture saturation of the building materials and structure. Using negative pressure along with the proper vapor barriers dehumidification will prevent these problems.

Negative Pressure is accomplished by installing an exhaust fan pulling air from the pool area space and discharging it to the building exterior. This fan should be sized to exceed the fresh air make up by 25-35%.

 **IMPORTANT:** Fan noise must be considered prior to installation. If possible, the fan should be installed in the mechanical room close to an exterior wall and connected to a grill in the pool space with insulated flex duct.

 **NOTE:** If installing the negative pressure fan in an attic or any area other than the mechanical room, the fan should be as far away from the pool space as possible to reduce fan noise. Insulated flex duct is recommended for noise reduction.

 **FIREPLACES:** Although fireplaces in pool rooms are generally not recommended, special considerations are applicable. **RULES:** 1. When not using the fire place, the damper **MUST BE CLOSED**. If open, it renders the negative pressure fan useless. 2. When using the fireplace, the negative pressure fan **MUST BE SHUT OFF**. If left on, the air will be drawn down the flue causing the smoke and gases from the fire to be pulled into the room.

 **A SIMPLE TEST:** To test for negative pressure, turn both the negative pressure fan and the DXAIR fan to ON. While standing on the outside of any pool room door, light a match or candle, crack the door open ¼”, hold the flame close to the crack. The flame will point to the space that has negative pressure. It must point toward the pool room space.

When designing for return air, any additional exhaust fans or exhaust systems for chlorine/chloramines, Careful attention should be given to all options are looked at carefully as they can affect the sizing and/or use of a negative pressure fan within the space.

## EXCERPT FROM ASHRAE 2019 HVAC APPLICATIONS HVAC Applications Manuals

“Failure to maintain proper chemistry in the pool water causes serious air quality problems and deterioration of mechanical and building systems. Water treatment equipment should be installed in a separate, dedicated, well-ventilated space that is under negative pressure. Pool water treatment consists of primary disinfection, pH control, water filtration and purging, and water heating. For further information, refer to Kowalsky (1990).

Air quality problems are usually caused by the reaction of chlorine with biological wastes, and particularly with ammonia, which is a by-product of the breakdown of urine and perspiration. Chlorine reacts with these wastes, creating chloramines (monochloramine, dichloramine, and nitrogen trichloride) that are commonly measured as combined chlorine. Adding chemicals to pool water increases total contaminant levels. In high occupancy pools, water contaminant levels can double in a single day of operation.

Chlorine’s efficiency at reducing ammonia is affected by several factors, including water temperature, water pH, total chlorine concentration and level of dissolved solids in the water. Because of their higher operating temperatures and higher ratio of occupancy per unit water volume, spas produce greater quantities of air contaminants than pools.

The following measures have demonstrated a potential to reduce chloramines concentrations in the air and water:

**OZONATION.** In low concentrations, ozone has substantially reduced the concentration of combined chlorine in the water. In high concentrations, ozone can replace chlorine as the primary disinfection process; HOWEVER, ozone cannot remain at sufficient residual levels in the water to maintain a latent biocidal effect, so chlorine must be kept as a residual process at concentrations of 0.5 to 1.5 mg/kg.

**WATER EXCHANGE RATES.** High concentrations of dissolved solids in water directly contribute to high combined chlorine (chloramines) levels. Adequate water exchange rates are necessary to prevent buildup of biological wastes and their oxidized components in pool and spa water. Conductivity measurement is an effective method to control the exchange rate of water in pools and spas to effectively maintain water quality and minimize water use. In high-occupancy pools, heat recovery may prove useful in reducing water heating energy requirements. (NOTE: DXAir recommends: Testing of all water should be done prior to use with your pool and after it has entered your pool. This means city water or any other water source used in your pool, not just what is in the pool being treated. City water may bring in additional sources of contaminants and chlorine that affect the overall balance.)

**MEDIUM PRESSURE UV.** UV medium-pressure UV lamps for water treatment can reduce the amount of Chloramines and should be evaluated during design. Medium-pressure UV can replace chlorine as the Primary disinfection process; however it does not remain as sufficient residual levels in the water to Maintain a latent biocidal effect. Consequently, chlorine is required as a residual process at concentrations of 0.5 to 1.5 mg/kg.

**SWIMMER SHOWERS:** Requiring each swimmer to shower before entering the water helps reduce the Amount of body oils released into the water, thereby reducing the amount of chloramines generated.

**BATHROOM BREAKS:** Facilities that require all swimmers to exit the pool every hour and visit the Restrooms dramatically reduce the amount of urine introduced into the pool.

# INSTRUCTIONS FOR WARRANTY OWNER MAINTENACE RESPONSIBILITIES FOR WARRANTY

General maintenance on any equipment is handled much like your home or office. Scheduling regular checks/maintenance on your dehumidification to ensure it is operating properly is required to maintain your warranty. DXair will ensure your warranty remains intact if you will follow a few simple procedures for us. If this is a commercial project with thermostat and humidistat located in the pool room, we recommend that these controls be put under a cover and "locked down" so that the temperature and humidistat settings cannot be changed by customers or staff not allocated to do so.

The "Owner" is required to set up a regular preventive/maintenance schedule with the installing contractor and maintenance staff or the warranty may be void. We recommend full inspections take place every 6 months and records maintained. There is a one-year total warranty on the complete unit and the installing contractor for your project would be the most likely candidate to handle your first year service/warranty agreement.

- **OWNER TO CHECK FILTERS** ON A REGULAR BASIS (MINIMAL EVERY TWO WEEKS) AND ENSURE FILTERS ARE CLEAN OR REPLACED. If the filters become plugged it severely restricts air flow in the space.
- DO NOT INSTALL equipment above electrical raceways or plumbing or in a pool room suspended above the pool.
- OWNER to check condensate drain, lines, traps and ensure they are free of debris AT ALL TIMES. Do this weekly!!!!
- **OWNER TO CHECK FOR ANY KIND OF LEAKS** IN PIPING OR PLUMBING, AND IF FOUND, CONTACT MECHANICAL CONTRACTOR, PLUMBER, ETC. TO DETERMINE WHAT IS LEAKING AND TO ENSURE IT IS FIXED AS SOON AS POSSIBLE. (Leaks can cause fluids from system to drain and burn out items if not caught and fixed, please check this on a regular basis as the system "settles" in and after installation).
- If the system is not dehumidifying, check the following: Humidistat and Thermostat settings and ensure they are in line with the design settings for your system (80-84 pool, 82-86 Air Temperature, 50%-60% RH on humidistat). Ensure that cooling setting is above the heat set point for the space (i.e. -86 room heat, set cooling at 88 degrees not below 86)
- Check to see if the system is running or if there are any RED LIGHTS appearing on the side panel and what they say (i.e. "compressor lockout").
- Did you have a power out recently? If so, shut the system down completely, wait a few moments, and turn it back on. Does it re-set?
- If everything is set correctly and the system is still not working, call your mechanical contractor who installed your system.
- **Owner to maintain proper pH and Chlorine/Bromine/Salt Balance** of pool water at all times to prevent corrosion and rust of equipment, electrical wiring, parts, relays,

contactors, etc. If you can smell chlorine in the pool room, the pool is out of balance. DXAIR will not warranty any parts or equipment that have been destroyed or are deteriorated due to chlorine or improper use of any pool chemistry system or contaminated water sources. If this is a salt water pool, it is imperative that client and staff are trained to balance the pool water properly. We do not recommend salt water pools as they are highly corrosive and difficult to balance. Speak with your pool company/chemistry professional to be trained in proper balancing techniques and maintaining your chemistry. Neither the mechanical neither contracting firm nor DXair can nor will be held for responsible for problems arising from water quality issues.

- 1. Chemical levels in the pool water must be maintained within acceptable limits at all times to avoid health hazards and/or possible equipment/component corrosion and damage. Chlorine levels in excess of 6 PPM (parts per million) are to be avoided. pH levels below 7.2 and above 7.6 are to be avoided. Salt should be discussed with your chemistry professional.
- NOTE: When balancing pool water, any other water source or liquid source that is used in your pool water may also require testing. City water may bring in additional chlorine and contaminants that the client may not be aware of, and these additional sources of contaminants can cause deterioration even though your pool chemistry may read in the normal ranges. Look INSIDE your unit every several months; look at your coils and internal components- anything showing signs of rust and/or corrosion of any kind needs to be addressed immediately whether your pool water testing indicates it is in balance or not!
- 2. Automatic chemical feeders should never be installed up stream of the system's heat exchangers. Super chlorinated water, such as produced by such feeders, can destroy the heat transfer surface within the exchanger. When automatic chemical feeders are installed downstream of the heat exchanger, certain precautions must be taken to prevent heat exchanger damage. A check valve (non-metallic) must be installed in the water piping between the heat exchanger and the chemical feeder. This will prevent the super chlorinated water in the chemical feeder from draining back into the heat exchanger when the pool water pump is shut off.
- Bi-Annual and Annual maintenance schedules should be set up with your mechanical firm or mechanical responsible for the pool room: check belts, blowers, refrigerant, any leaks, check coils to see if they need to be cleaned. Look for rust, corrosion, "green", mold, water leaking etc.

#### MONTHLY MAINTENANCE

- Air Filters- Check and replace as necessary. If this is a permanent filter it needs to be cleaned regularly. Check filters a minimum of every 2 weeks and clean or replace if required. Dirty filters restrict air flow.
- Fans and Drives- Check for worn or loose belts; adjust or replace as necessary.
- When it is necessary to replace one belt in a set, the entire set of belts should be replaced.

- When fan belts are replaced, they could be retightened 24 to 48 hours after they are put into service. Check that fan bearing and locking collar set screws are tight, and lubricate bearings using high-quality lithium grease.
- Refrigeration Charge-Check the refrigerant sight glasses. When the refrigerant charge is correct, there should be no bubbles in the sight glass. If no sight glass, check super-heat and sub-cooling.
- Condensate Line-Check that the line is free from obstructions. Always keep the condensate trap and lines free and clear.
- Unit Interior/Exterior- Check for torn insulation and repair if necessary. Check for scratches, nicks, rust, etc., and repaint promptly.

#### **6 MONTHS- ANNUAL MAINTENANCE**

6 Month Complete System Checkup IS MANDATORY & Annual maintenance should include all items listed under "Monthly Maintenance," in addition to the following. A complete report must be maintained of all preventive maintenance, maintenance checks and all service calls/service records.

Compressor and Refrigerant System- The compressor and refrigerant system should be inspected annually by a qualified service technician. As a minimum, the following items should be done:

- Perform a complete unit operation test, including log entries.
- Inspect fan bearing and belts for excessive wear; replace if necessary.
- Inspect the general refrigeration system for possible leaks, chafing between tubing, and other items detrimental to operation.
- Check system super-heat. (10-12 degrees) & Check sub-cooling. Record this data.
- Check electrical connections for tightness, including the compressor electrical box.
- Clean debris and dirt from drain pan.
- Check all coils and determine that pool chemistry is correct (no corrosion, green, rust, leaks etc.). Check all coils for cleaning.



## DXair #BcfH\Yfb'; Yc '@@7' Pool Dehumidifiers' LIMITED WARRANTY DXAIR System & Peripheral Item Warranty

(Within this document Northern Geo LLC will also be known as DXair. Warranty will be continually updated and posted to the Warranty Section of our [website www.DXair.com](http://www.DXair.com).)

**IMPORTANT:** All warranty is void when components/equipment/peripherals/controls show signs of rust, deterioration, corrosion, "green", white substances, fins crumbling, blower housing corrosion, continuous breakdown of same component, leaking coils, etc. as this is a sign of poor pool chemistry. Any claims of warranty will require all parts and/or equipment to be sent back to factory via RMA provided for plant engineering review and final determination as to defect/warranty/non-warranty.

**MODELS COVERED:** This limited warranty is provided by DXair / Northern Geo LLC in accordance with the factory warranty for pool dehumidifiers. This warranty is provided to the original purchaser of the dehumidifier as long as the dehumidifier remains installed correctly and with all components intact, preventive maintenance performed and recorded, and at its original place of installation and original owner. Note, there are no labor allowance warranties provided after 90 days from delivery date, only parts warranty and only for those items pertaining to a failed component due to factory defect. The SS Series (DXair SS Series) offers 1 year total unit parts warranty, 5 years' compressors with extended 2 years' parts warranty and 2-5 years' extended refrigeration circuit warranty based on proper installation, duct work, operation and pool chemistry. Any reimbursement of labor allowances is in accordance with the Labor Warranty Reimbursement schedule provided with your warranty. No other fees (service calls or otherwise) will be paid. If you cannot install the equipment in the first 90 days from delivery, you must notify DXair immediately.

It is normal industry practice that the installing contractor guarantees and provide a preventive maintenance agreement for all first year service expense to the owner. Therefore, DXair has designed this policy to help partially offset the contractor's replacement or repair costs. Each contractor must provide a complete one year service/warranty/labor/preventive maintenance agreement as part of their proposal. If in the first 90 days of installation, a factory defect is found in the DXAIR Unit, the proper documentation, photos, service records must be provided of the problem and the factory will determine what if any, labor allowances may be applicable. This policy is in no way intended to eliminate the Contractors responsibility in providing any service repair of the equipment or proper installation and/or start-up, which includes complete system check out and adjustments that may be required due to shipping or normal start-up of the equipment. DXair does not reimburse any contractor over and above the started warranty labor allowances provided and as listed. Start Up and Commissioning forms must be returned within 10 days of start up or there is no warranty on any system. No labor allowances will be given for thermostats, refrigerant, vacuuming, or for other accessories, existing, new or replaced by the contractor. Claims for the labor allowance are made according to the circumstances and nature of the failure and can only be approved by the factory. DXair does not reimburse any contractor when factory does not allow the claim or finds deterioration of components due to chemistry imbalance or improper installation and operation.

### **WARRANTY COVERAGE**

Limited Warranty for all Stainless Steel Unite: Factory warrants all internal components (1 Year) incorporated into the dehumidifier at time of shipment shall remain free of defects in workmanship and materials for 12 months from date of shipment, and 5 years for the compressors provided the system has been properly sized and installation and proper maintenance has been accomplished. The Standard Warranty Guidelines for all stainless steel units is: 1 year total unit parts, 5 years compressors. The extended warranty for all stainless steel units is 2 years parts and 2-5 years refrigeration circuit warranty. Any signs of rust, corrosion or deterioration are not a factory defect, and is indicative of poor pool chemistry. Test all water sources and pool water sources and balance the pool according to the specified requirements for natatoriums. If salt water pool, more care must be taken to balance the pool properly.

If DXair determines that the dehumidifier or any part of the dehumidifier has a defect in workmanship or materials, DXair at its option and review, will require all supporting documentation as to problem, failure and diagnosis, and/or replace the defective part only after review in writing and authorization by factory.

#### ACCESSORIES

The dehumidifier may be delivered with accessories and/or components which may not have been incorporated into the dehumidifier at the time of shipment (Other Components for the unit). Such other components are warranted by the factory or manufacturer of that peripheral item to be free from defects in workmanship material for one year from proof of Certificate of Occupancy date or proof of certified start-up date (no later than 90 days from delivery), provided they are installed and properly serviced/maintained by a qualified and trained HVAC Contractor and the other conditions of this warranty are met. If a defect exists in the "Other Components", the factory will repair or replace them if factory determines that a defect in workmanship or materials exists (parts may be required to be returned directly to factory for review, at client's expense). In addition, such "Other Components" may be warranted by the manufacturer may be pass through warranties and the manufacturer may have to be contacted directly for warranty. (i.e. Gas/Propane duct furnaces, electric duct heaters, hot water coils, controls etc. have their own specific warranties that are not related to the dehumidifier but are included in part of the overall installation). Purchasing controls or peripherals outside of what DXAir has provided are not covered by any warranty or labor allowances unless stated in writing by DXAir.

#### ITEMS OR CIRCUMSTANCES NOT COVERED:

1. Components or parts not provided by DXair and purchased by others.
2. Any equipment, parts, compressors, duct heaters, furnaces, internal coils etc. that become defective or deteriorate due to poor pool chemistry. Components that continually fail after replacement indicate a problem with the installation and may or may not be covered under warranty.
3. Components or parts on which tags or nameplates have been removed, altered or defaced or replaced with a non-factory approved part or component.
4. Scratches in or discoloration of finishes (this includes discoloration, rust, corrosion of other signs of corrosion) or problems as a result of improper pool chemistry, salt water pools, improper balance of chlorine/bromine/chemicals, maintaining temperatures and operating conditions outside of requirements causing excessive humidity).
5. Refrigerant, oil, nitrogen, nor glycol is covered.
6. Serviceable items and normal maintenance/preventive maintenance as required per our installation manual (Instructions for Mechanical, Instructions for Owner to maintain the system)
7. The workmanship of any contractor/installer, builder, DXair and factory disclaims and does not assume any liability of any nature for unsatisfactory performance caused by oversizing or under sizing systems, spec to spec systems where no Sensible Calculations/Building Loads or pool load data has been provided, retrofitting of existing systems based on current equipment only and no loads, improper installation and operation of the system, operating outside of the ASHRAE guidelines for water/air temperatures and humidity levels, improper pool balance and chemistry (salt, chlorine/bromine, etc.), repair or maintenance.
8. Any labor or materials costs, trip charges, diagnostic service calls, for removal, reinstallation, repair and replacement of the defective component or part (unless clearly authorized in writing or an extended warranty has been purchased). DXAir does not remit payment for any daily 'late charges or fees' charged or passed on by any building contractors or others for claims of systems not operating or downtime for service/repairs, installation not completed on time due to any delay of technical support or lack of components for repair or service. Delays are inevitable in all industries and components

may not always be available at time of repair. All terms and conditions must be met in accordance with factory policy.

9. Electricity or fuel costs or an increased or un-realized savings in same, for any reason whatsoever.
10. Any claims of damage caused by excessive temperatures, humidity, or pressures, fuel or gas explosions, shutting off components of any system that must operate to perform the proper functions required, electrochemical reactions, any and all water and air impurities, changing components as provided by DXAir including controls, poor pool chemistry, no negative pressure fan in the space, no vapor barrier in the space, electrical failures, plumbing or piping failures, use during construction, or Acts of God.
11. Any damage or failure resulting from the introduction of harmful chemicals, caustic fluids, or liquids detrimental to any unit component, including but not limited to improperly applied or maintained heat transfer, liquids, city water, any water source with impurities, or chlorinated pool or spa water, salt water pools, or related to chemicals and water chemistry issues.
12. Any damage due to equipment sharing mechanical space with chemicals and pool equipment. These two areas must be maintained separately to protect the equipment.
13. Any damage or failure resulting from improper unit sizing, improper peripheral sizing or failure to follow all installation instructions for system and the peripherals according to manufacturer's instructions.
14. Any damage or failure resulting from improper sizing (over sizing or under sizing) of the air delivery system (duct work) for these projects. Any damage or failures due to incorrect placement of diffusers and/or duct system - supply and/or return.
15. Any damaged caused by fireplaces within the pool room.
16. Any damages caused by the lack of vapor barriers or lack of negative pressure within the space.
17. Any damage or failure resulting from lack of preventive maintenance on a regular basis (follow Owners Instructions)
18. Any damage or failure resulting from lack of outside air, or increasing outside air requirements beyond ASHRAE Guidelines.
19. Except as set forth above related to "other components", components of the dehumidifier system that are part of the system that are not DXair products are not covered by the dehumidifier warranty. Duct furnaces, controls, hot water coils, boilers, etc. are manufactured by others have specific warranties for these items. Contact DXair for the pass through warranties on the peripheral components for your system.
20. Shipping Charges, delivery expenses or administrative fees incurred by the purchaser in repairing or replacing the dehumidifier.

**CONDITIONS OF WARRANTY:**

The warranty herein is void under the following circumstances:

1. Any equipment not installed by a licensed HVAC Contractor (the address and contact information along with the license number is required)
2. Any equipment where Start Up Commissioning, Warranty forms, Receipt Signature Form for Installation Manuals by Contractor and Owner, and/or Certificate of Occupancy (commercial) are not returned within 10 days of installation and start-up numbers are approved by factory.
3. Any equipment where the contractor or supplier or rep has not been paid for the equipment or installation.
4. Failure or malfunction resulting from improper or negligent operation, accident, abuse, freezing, humidity, electrical imbalance characteristics, misuse, unauthorized alterations to system or controls, incorrect electrical supply, electrical surges, or improper installation of unit and/or peripherals items according to manufacturers' specifications, repair or maintenance, improper air delivery/duct work system, or operating outside of all guidelines provided by ASHRAE, ACCA, SPS or DXair Engineering.
5. Failure or malfunction resulting from any conditions within the structure, including

replacement systems or any new system that is undersized due to non-compliance of providing all building loads/Sensible Calculations, accurate information for previous systems installed and all information required for finalizing all sizing of the system.

6. Failure resulting in any project where spec to spec is requested for rebidding purposes, no loads have been provided, proper quote forms not completed and returned, and where competitor specifications are the only basis for design.
7. Failure due mold and/or mildew and/or any chemicals or toxins secreted there from or damage that results from mold, water, condensation, humidity, fungus or bacteria, chemicals used in the space or mechanical space, any water inside the unit resulting from lack of maintenance in keeping all drains and traps free and clear of dirt and debris.
8. Failure or malfunction resulting from a contaminated or corrosive air or liquid supply, the additional of unapproved chemicals, operation at abnormal temperatures, pressures or flow rates, opening of the refrigerant circuit by unqualified personnel or any attachment, accessory or component not authorized and approved by DXair and/or factory.
9. Failure or malfunction due to misapplication or faulty building design or construction (include building materials, windows, lack of mechanical space, lack of proper vapor barriers), condensate drain, duct work design or installation.
10. Products on which payment is in default or short paid. No warranty will be available on any system that is in default of any full or partial payment or for non-payment of parts. Loss of warranty for periods of non-payment will be applied to overall warranty terms.
11. Work performed without prior authorization or approval and without authorization/requisition number and without proper documentation verifying compliance with above terms.
12. All warranty/factory defective claims must be submitted with complete pool/balancing chemistry reports (must be maintained by all customers on daily/weekly/monthly basis), a complete explanation for the failure of component, and all components must be held until factory authorizes disposal.
13. Factory to determine warranty labor allowances on any part of the dehumidifier that is deemed by factory (or other) to be defective within the first 90 days of delivery. A complete diagnostic write up must be provided by the installing contractor if any major part of the system fails within this period of time. Proof of startup and commissioning documents are required. A certificate of Occupancy may be required.

#### ADDITIONAL WARRANTY INFORMATION:

- All Warranty forms (including non-warranty, peripherals and manufacturer warranty forms) can be found on the DXAIR Website under "Warranty Forms" or are included with your Installation Manual/Contract/or Project USB. When completed, please email to [sales@dxair.com](mailto:sales@dxair.com).
- NO PHONE CALLS WILL BE ACCEPTED FOR WARRANTY OR NON-WARRANTY PARTS ORDERING AND PRICING.
- All forms must be completed or an email sent to [sales@dxair.com](mailto:sales@dxair.com) and response time is generally 24-48 hours. Incomplete information (model, serial number, nomenclature, client name, etc.) will not be processed. List all part numbers and descriptions required.
- Northern Geo LLC provides warranty for all DXair Dehumidifiers when installed within 90 days of shipment. Review your warranty carefully as DXAIR does not reimburse over and above factory stated warranty or unless authorized and approved in writing by DXAIR and factory as clearly stated in all contracts.
- There are no variances for warranty and warranty cost/coverage/fees, etc. & warranty is subject to change without notice. Warranty form & Start up Commissioning sheets must be returned to DXAIR within 10 days of installation.
- If not installed within 90 days of shipment, warranty begins 90 days from the date of manufacture or Serial Number of the unit, or the actual date of shipment or installation. There will be no exceptions or variances to factory procedure.
- If equipment is stored due to delays in project and not installed within 60 days of shipment, the warranty begins 90 days from the date of manufacture/serial number of the unit or

Certificate of Occupancy and/or Certified Proof of startup is required.

- Please allow 24-48 hours for factory review and pricing to be provided for all warranty and non-warranty parts. If an emergency situation, please contact DXAIR immediately to expedite the process and we will make every effort to assist you as quickly as possible. Please ensure to provide the proper warranty form, part numbers, serial numbers, job name/location, and any information that will help to expedite your process. Missing information will delay your replacement parts. Factories may not have certain components in stock and delays may occur.

#### **DXAIR DEHUMIDIFIERS FACTORY WARRANTY**

- DXAIR SS Units per catalog: 1-year total unit parts, 5 years' compressors, extended 2 year parts and 2-year extended refrigeration circuit.
- DXAIR EC/LV/MC Units: (1-year total unit, 5 years' compressors); labor allowances/labor warranty applicable to first 90 days only from date of installation. This series offers 2-5 years parts extended warranty and a 2-5-year extended refrigeration circuit warranty.
- PBXT & GT Series- Discontinued
- DXAIR GF Series: ALL GF SYSTEMS ARE DISCONTINUED.
- All Hydron/Colony Series - discontinued and parts are no longer available thru factory.

#### **PERIPHERAL ITEMS WARRANTY:**

Peripherals installed that are not built by DXAIR factory carry the specific manufacturer's stated standard warranty. Their warranties may not be the same as the dehumidifier; however, they are based on the same standards as the dehumidifier warranty: proper pH balance/chlorine balance of swimming pool, proper installation/location and wiring, installation manual, operation and the following of all Design Guidelines by DXAIR and by ASHRAE for indoor pools. Failure to follow guidelines will void all warranty.

- Modine (Sterling) Gas/Propane Duct Furnaces
- Warren Duct Heaters
- CoilMaster Outdoor Fluid Coolers or Condensers
- CoilMaster Hot Water Coils
- Magic Aire Coils (do not return coils, hold for information and call DXair)
- Mortex Summit Coils
- Armstrong Pumps
- B&G Pumps
- Belimo Valves
- HRV's, ERV's, 100% Outside Air Purge, Economizers
- Miscellaneous valves, electrical components, & controls (1 year parts only)- all small parts less than 12 months old, must be returned to Dennis DeCarlo, DXAIR, 30150 Marquette, Garden City MI 48135
- For all other peripheral items, use the appropriate manufacturer's warranty form as provided by DXAIR with the appropriate RMA for return. DXAIR does not offer labor allowances nor reimburses labor warranty on any equipment or peripheral item unless approved in writing by DXAIR or the manufacturer and within the first 90 days of delivery of the dehumidifier to the end user. There are no labor allowances for controls.

#### **NON-WARRANTY PARTS**

Please email your request to [sales@dxair.com](mailto:sales@dxair.com), with customer name, model number, serial number, parts required. We will direct you to the appropriate person/company at that time.

#### **RETURNING OF WARRANTY PARTS**

- No parts or equipment may be returned without an RMA (Return Merchandise Authorization #) and/or completion of warranty form.
- Parts and/or equipment are not returned to DXAIR; they are returned directly by client to the factory when required, with completed Warranty Forms, Warranty Tag and/or RMA Number provided or to our warehouse (verified at time of RMA). This is at the cost to the client not DXair. If damage occurs due to incorrect packaging of returned parts/equipment, these damages will be billed to or repaired at the customer's expense. If customer refuses to pay for damages, then equipment and/or replacement parts/peripherals will not be shipped and no further warranty is applicable.
- DXAIR will indicate if returning the part is required depending upon factory instructions. All

returned parts shipments must be returned via factory instructions/procedures and requires a signature for delivery confirmation. All warranty parts requiring return must be returned within 30 days of ship date of new part; factory no longer accepts parts after 30 days and there will be no credit or reimbursement for parts received after 30 days.

- The client is responsible for proper packaging to ensure no damage upon return and is responsible for shipping costs to & from factory for any warranty or non-warranty parts. The factory reserves the right to determine whether the item is warranty or non-warranty due to defect, improper installation, improper wiring, pool chemistry related failures, installation or operation failures; etc. The factory may choose to send back the component to the manufacturer for final determination of warranty vs. non-warranty, defect vs. non factory defect.
- Any factory credit amount reimbursed will/may be based on testing “defective” part to determine if the part was in fact a factory defect or in unintended installation error. If found not to be a factory defect, the customer is responsible and liable for all payments/shipping/freight, and reinstallation of said parts.
- DXAIR and the factory reserve the right to replace, substitute or provide alternate parts at any time of equal/greater value/performance without notification.
- Any parts (substituted, or alternated for any reason) purchased by others outside of DXAIR/warranty without DXAIR or factory authorization in writing, DXAIR and factory reserve the right to determine reimbursement under the parts warranty and may refuse reimbursement of said part and/or labor. DXAIR does not reimburse any contractor service calls, drive time, phone calls, computer time, designated email time, diagnostic time, trip charges, fuel, meals, truck or delivery/pick up charges, charges for employees or other individuals sub-contracted or otherwise; refrigerant, glycol, or re-charging of any system, any peripherals/parts/controls not supplied by DXAIR, electrical re-wiring or re-plumbing, re-installation of parts. DXAIR does not reimburse for claims of damage to building or for system down time.
- Damages due to deterioration during periods of storage by the by client prior to installation and operation.
- It is the responsibility of all mechanical contracting firms to notify DXAIR Technical Support immediately, in writing or via phone call/email immediately, if any part of the DXAIR system is not functioning properly or defective.
- Client agrees to indemnify and defend DXAIR against, to hold DXAIR harmless from, and reimburse DXAIR on demand for, any liability, damage, loss, cost or expense (including attorney's fees and costs of investigation incurred in defending against and/or settling such damage, loss, costs or expense or claim therefore and any amounts paid in settlement thereof) reasonably incurred by DXAIR in respect to Client's or end users failure to perform or violation of any agreement or covenant on the part of Client relative to Client's failure to follow the terms and conditions of its proposals, sales agreements or any agreement with DXAIR including, but not limited to, Client's or end users failure to follow procedures for quotes and information required for the building and project, provides incorrect or incomplete information for any project where DXair is installed based on incorrect or incomplete information, failure to follow design, operating water/air temperatures, humidistat settings at 50-60% RH guidelines, preventive measures , operating conditions and/or installation of the products guidelines sold by DXAIR to Client. Additionally, Client agrees to indemnify and defend DXAIR against, to hold DXAIR harmless from, and reimburse DXAIR on demand for, any liability, damage, loss, cost or expenses (including attorney's fees and costs of investigation incurred in defending against and/or settling such damage, frivolous law suits, loss, costs or expense or claim therefore and any amounts paid in settlement thereof) reasonably incurred by DXAIR as a result of any claim made by a customer of client against DXAIR.
- Other than the obligations of DXair expressly set forth herein, DXair disclaims all warranties, express or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose. DXair shall not be liable for any indirect, punitive, incidental, special, consequential, or similar damages including without limitation, injury or damage, or claims of injury or building damages,

punitive damages, or damage to persons or property or damages for loss of use, downtime, cost, profits, inconvenience, cohabitation issues, living arrangement issues, spousal or significant other issues or any loss of time business or personally.

- DXair reserves the right to follow normal company and business procedures, legal action etc. when company is not paid for the system or costs outside of warranty.
- DXair is the “manufacturer”. Manufacturers do not ship any equipment without complete & rigorous factory testing and does not ship damaged equipment. DXair is not an installing contractor, we are not a licensed mechanical engineer and do not provide Building Loads or Sensible Calculations for any project, we are not a licensed mechanical installation firm that provides installation or service; therefore, installation problems, operating issues must be addressed with the engineer or installation contractor you have hired to handle your project. In the event we have provided the client with a name of a contractor who has either sold, represented or installed these systems- this is not to be deemed as a referral or a testament as to the quality of work or reliability. This is only for the client when processing bids/estimates for your project. The final choice of contracting firms is the responsibility of the client, as is checking all references of any contractor you choose to work with. We will work with the contractor you have chosen to ensure that the system is installed and operating to factory specifications.
- RETROFIT PROJECTS: When DXAIR equipment is used to replace any existing system of the same size and scope of work and is properly sized with pool room load data, sensible loads/building calculations provided by clients, and meets the ASHRAE Guidelines, these systems will operate long term and properly. If the original system was undersized for evaporation load, sensible calculations, dehumidification and/or air flow and is being replaced with a similar system at the customer’s request, DXair will quote the existing system based on the quote forms/Sensible Loads or building data provided and/or quote the correctly sized system. If the client chooses to remain with the existing sizing of system (due to areas that may not be able to be changed out/upgraded/replaced such as duct work, electrical requirements, plumbing, etc.). This may mean that certain aspects of the previous installation may not meet ASHRAE guidelines for air flow, evaporation, dehumidification, condenser line sets, etc. and the necessary changes may be required. DXair takes no responsibility for any problems resulting from any undersized system, incorrect sizing of plumbing or piping.
- If any building requirements have not been met or cannot be met with new installation including the proper air flow/duct system and diffusers, negative pressure, supply air ducting and diffusers, return air ducting according to ASHRAE and ACCA Manuals, and temperatures are not maintained in accordance with the Design Conditions set down by ASHRAE HVAC Applications Manuals, DXair nor the mechanical contractor installing this system will be held responsible for problems with mold, moisture, condensation, poor air flow/circulation, poor pool chemistry, damage or deterioration to building materials.
- All non-warranty and/or warranty parts: require payment in advance of shipping and will be reimbursed once defective part is returned. Freight/shipping costs to customers or to factory are not covered under warranty. No parts shall be shipped without payment. DXAIR accepts checks, Master Card, Visa, and Wire Transfer of funds.
- Note: Warranty is for defective parts only; it does not include or cover any freight charges, freight damage or damage to any equipment or parts by carrier in transit. All claims for visible damages as a result of shipping must be made at signed receipt of materials. All claims for concealed damage as a result of shipping must be made immediately. All claims must be accompanied by the necessary papers/photos/or documents (Bill of Lading indicated damage) to substantiate the claim. The customer may be responsible for filing all claims with carriers. Contact DXair for further instructions. When equipment is not checked upon arrival and damages are found after the shipment has been received; liability claims and reimbursement are very limited.

Note: All Magic Aire Coils: do not refuse delivery on any damaged equipment or there will be no reimbursement. Hold for RMA and return procedures.

Warranty and Warranty Labor allowances when and if applicable, are subject to change without notice.

### **LIMITED PRODUCT WARRANTY**

#### **WARRANTY TERMS**

- ❖ Subject to the limitations set forth below, factory warrants product against defects in material or workmanship under normal use and with proper maintenance for the time periods specified below ("Duration of Warranty/Statute of Limitations"). Under this Warranty we will replace or repair any defective part, or portion thereof, within a reasonable time after receipt of the defective part. An exchanged (replacement) part will be warranted for only the unexpired portion of the original Warranty. This Warranty does not cover the cost of diagnosis, parts purchased outside of what was included with the DXAIR system, transportation, labor, parts damaged in shipping, parts damaged due to improper pool chemistry, shipping, or any other incidental costs involved in the removal of the defective parts or the installation of the replacement part unless approved by factory at factory stated labor allowance rates. Do not replace parts in any system with parts purchased outside the warranty without authorization from DXAIR or you may void your warranty. Do not change controls or wiring without authorization by DXAIR or you may void your warranty.

#### **DURATION OF WARRANTY: STATUTE OF LIMITATIONS**

The Warranty shall only cover defects occurring during stated warranty policy.

#### **HOW TO OBTAIN WARRANTY**

Notify DXAIR in writing ([sales@dxair.com](mailto:sales@dxair.com)). Complete the necessary warranty forms found in your installation manual and submit according to these procedures. DXAIR & factory will make every effort to correct any problem covered by this Warranty as quickly as possible; however, DXAIR is not responsible for any default or delay in its performance that is caused by war, governmental restrictions or restraints, strikes, material shortages, company or operating system failures, additional manufacturer review of any component required, or any other occurrences that are beyond the control of DXAIR or factory.

#### **EXCEPTIONS TO WARRANTY**

##### **THIS WARRANTY DOES NOT APPLY TO:**

(1) Air filters, fuses, refrigerant, glycol and oil; (2) Products that have been relocated after original installation; (3) Any portion of the system not supplied by DXAIR; (4) Products or component parts on which the tags or nameplates have been removed, altered or defaced.; (5) Scratches in or discoloration of finishes; (6) Products damaged during shipment or by improper service, products which have defects or damage which results from improper installation, wiring, electrical imbalance characteristics or maintenance or caused by accident, misuse or abuse, fire, flood, alteration, mis-application or or modification of the product, breakage or rupture of water tubing and/or water condenser coil when subjected to freezing conditions, use during construction, or acts of God. (7) Products which have defects or damage which result from a contaminated or corrosive air or liquid supply, the addition of unapproved chemicals, corrosion due chemicals, improper chemistry and pool balance, operation at abnormal temperatures, pressures or flow rates, unauthorized opening of the refrigerant circuit or any attachment, accessory or component not authorized and approved by DXAIR; (8) Any condition within the building, previous or existing, including mold and/or mildew and/or any chemical or toxin secreted there from or damage resulting from mold, moisture, fungus or bacteria; (9) Electricity or fuel costs, or any increases or unrealized savings in same, for any reason whatsoever; downtime or non-usable facility during repair/replacement time; building materials; (10) Products on which payment to DXAIR is or has been in default. (11) Products purchased outside of the warranty parts and installed. (12) Warranty does not apply to components or equipment failures due to non-compliance with the building requirements, building preventive measures, running units on city/municipal water, allowing fluid coolers to go dry or filling them with 100% water (freeze/burst factors during winter months), poor water sources quality, materials used in construction, mechanical space, and/or installation of these systems.

Warranty is not applicable to parts that become defective due to lack of maintenance of the complete system, operating outside of the Design Guidelines for the pool room, chemistry, water impurities, or salt water imbalances. DXAIR will not be held responsible for problems with defective parts due to salt water usage and/or any form of corrosion. Corrosion indicates pool water and/or other water chemistry is out of balance and it is the customers' responsibility to ensure proper balancing at all times.



This policy is not given in lieu of any other express warranties or policies, whether oral or written. There are no warranties expressed or implied, which extend beyond the warranty duration set forth in the 'Limited Product Warranty'. DXair expressly disclaims any liability for and excludes any liability for special, consequential or incidental damage arising from any defective product, breach of any express or implied warranty, breach of contract, improper pool chemistry or any other water chemistry issues that lead to deterioration of any components, lack of preventive maintenance, negligence or any other legal theory. Such disclaimed damages include, but are not limited to: loss of use of the equipment or any associated equipment, loss of capital, loss of personal "health" claims and subsequent medical expenses/health expense claims, loss of personal inability to socialize claims, loss of cohabitation claims, personal phone calls, emails, travel time and or expenses, cost of any substitute equipment, facilities or services and downtime costs or claims of customers of the purchaser for such damages caused by any defect in the product, any condition within the building or water, including mold and/or mildew and/or any chemical or toxin secreted there from or damage resulting from mold, fungus or bacteria, corrosion, rust, etc. The agents, dealers and employees of DXair are not authorized to make any modifications to this policy or any additional warranties or policies, and any additions or statements, whether oral or written, do not constitute warranties or policies and should not be relied upon.

**This document is subject to limitations set forth in the DXair 'Limited Product Warranty'. Warranty and warranty labor allowances, coverage, etc. are subject to change without notice.**

#### **LIMITATIONS OF REMEDIES**

Notwithstanding the above, DXAIR will only be obligated, at DXAIR's & factories expense and option, to furnish a new or rebuilt part or unit in exchange for the part or unit that has failed. This does not include the freight costs back to factory for defective part/unit, nor does the obligation cover freight costs of new equipment/part shipped. This cost is at the expense of the client. This is for the DXAir unit only. If upon review and assessment by factory that factory/DXAIR is not responsible for the failure of the equipment, the client is responsible for payment of any new unit/equipment that has been shipped to them. Failure to remit payment voids the warranty for the entire system, and further legal or collection actions may be taken at this time.

#### **OTHER**

This Warranty applies DXAIR products installed in the Continental United States and Canada only and is subject to change without notice. Warranty is subject to proper installation, operation, pool chemistry, water chemistry, water testing (pool and any other water sources used within the pool), 6 month scheduled preventive maintenance checks and logs maintained, maintaining design temperatures, proper air flow and duct system, negative pressure established and the proper Outside Air requirements met for all installations.

Warranty Contact Information: (320) 297-9100

All logs pertaining to service/maintenance and pool chemistry MUST be provided for all claims of factory defect.

All logs pertaining to 6 month preventive maintenance checks must be provided for all claims of factory defect.