

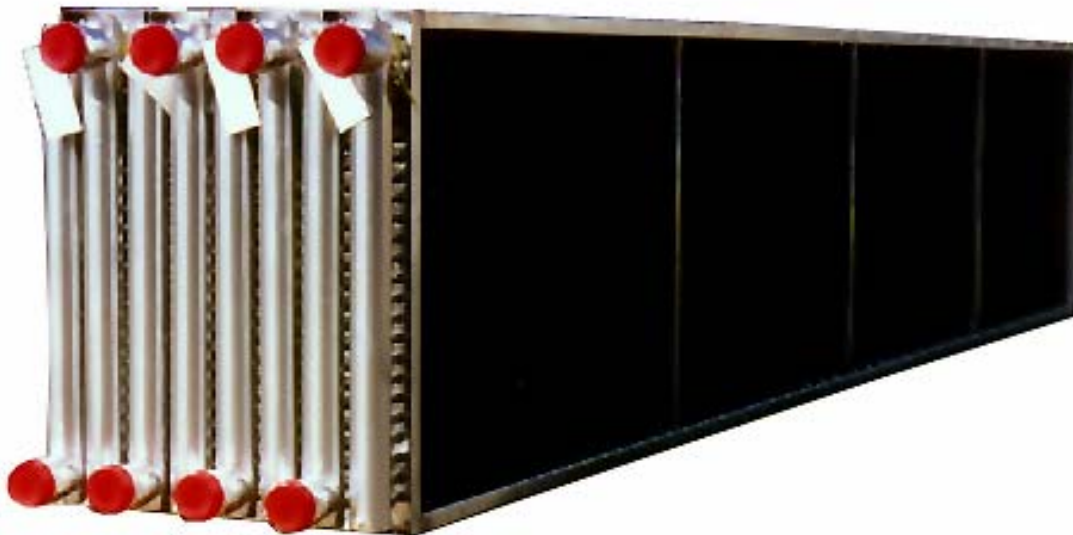


Maintaining Plate Finned Coil Products

The most common problem associated with plate fin coils is the lack of routine maintenance. In order to keep your system running at peak performance do not neglect maintenance of the coils. A dirty coil can reduce your capacity 20-30% or more, affecting the rest of the unit's components and leading to premature failure. In most cases the only time the coil is checked is when a problem has occurred.

RAE Corporation recommends that you establish a routine maintenance program and follow it. Some procedures to follow are:

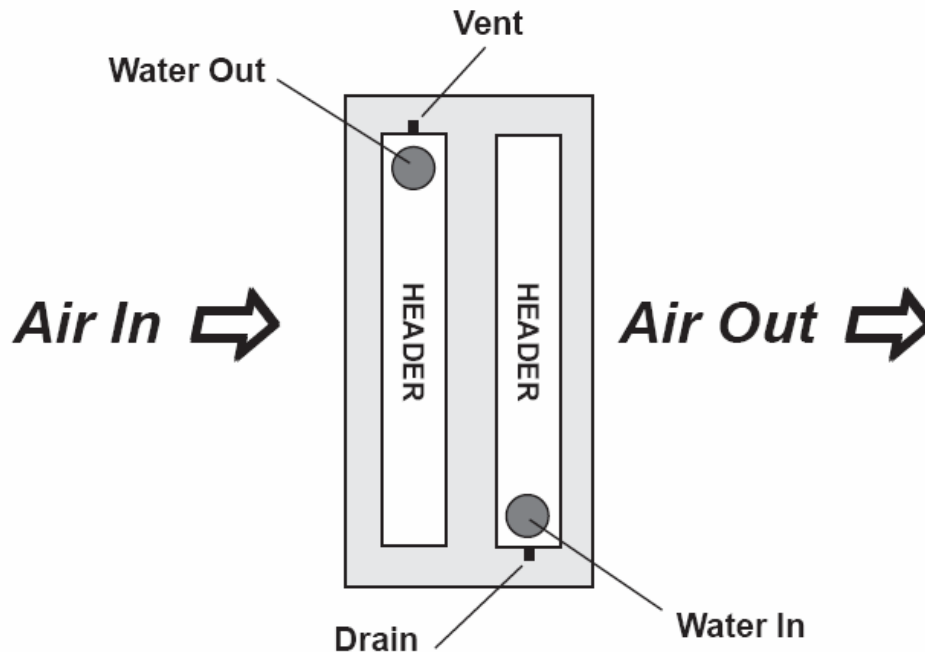
- ✓ The coil should be inspected on a monthly basis or more frequently, depending upon the system operation and duty ranges.
- ✓ All coil types should be cleaned at least once a year. If they are located in a dirty or corrosive environment they should be cleaned on a monthly basis or as needed.
- ✓ Do not use chemical solvents that will damage the materials or attack the brazed or welded joints. If black deposits are prevalent on any copper or brazed joints, beware of sulfur or other attacking chemicals in the area. Water and sulfur generate a very corrosive agent. If any type of chemical is in the atmosphere a baked phenolic coating would be a good option to consider.
- ✓ Clean the tubes and fins with a high powered vacuum, compressed air, or mild soap and water. Header and return bends should be cleaned with a soap and water solution, which will allow you to check for any pinholes or cracks that may not be visible.





Water Coils Application and Installation Recommendations

1. Piping should be in accordance with accepted industry standards and local codes
2. Provide adequate water treatment to protect the various components against corrosion, scale, slime, and algae. Water treatment should always be under the supervision of a water conditioning specialist.
3. Coils must be installed in a position to allow for free drainage.
4. Coils must be piped with water supply to connect on the air leaving side of the coil and the return connection on the air entering side. Connections are to be arranged for water flow from bottom to top.



5. Coils must be vented of air on initial start-up and each time the coil is drained. This can be manual, or an automatic air vent can be installed on the vent connection.
6. Coils must be protected from freezing if applied where ambient temperatures are expected to fall below 32° F. This can be accomplished by draining, or the use of a suitable antifreeze solution.
7. Dehumidifying coils must be provided with a drain pan.
8. It is recommended that piping have shut off valves and union fittings to facilitate coil removal, should repair be necessary.
9. Periodically check and clean the fin surface.
10. Inlet duct (if used) should be arranged to give equal air flow to the entire coil surface.



Direct Expansion Coils (DX) Application and Installation Recommendations



1. All incoming coils should be inspected for concealed or visible damage.
2. Piping should be in accordance with accepted industry standards and local codes.
3. Dehumidifying applications must be provided with a drain pan.
4. For maximum performance coils must be piped with the liquid connection(distributor) on the air leaving side of the coil and the return connection (suction header) on the air entering side of the coil thus providing a counter flow arrangement.
5. It is recommended that face velocities be maintained between 450 and 550 FPM. Face velocities above 550 FPM could cause significant moisture carry-over.
6. Larger evaporator coils are normally supplied with liquid distributors for the specific circuiting requirements. Thermostatic Expansion valves should be sized accordingly to distributor and load conditions.
7. DX coils are frequently exposed to temperature and mechanical stresses during installation and operation. It is imperative that the system is checked for leaks before, during and after start-up.
8. DX coils should be inspected on a monthly basis at the distributor, valves and the return bends for wear and or corrosion. Check Coil casing and support bracing as well for excessive vibration.
9. Control systems should be inspected on a weekly basis to ensure no icing conditions are present and that all circuits are operating properly.
10. Periodically check and clean the fin surface, if necessary.