



Preparing Your Cooling Tower for Startup:

A COMPREHENSIVE CHECKLIST

A proper cooling tower startup involves a series of critical steps, including:

- Conduct a pre-startup Inspection
- Add treatment chemicals
- Fill the basin
- Adjust the flow rate and fan speed
- Start the circulating pumps
- Continuously monitor the operation

Each of these steps is essential to ensure the proper functioning of the cooling tower, maintaining good water quality, and preventing equipment damage or failure.

In addition to the recommendations below, each cooling tower manufacturer may also have seasonal preventative cooling tower maintenance requirements for mechanical components such as fans and controls. A typical step-by-step walkthrough of a proper cooling tower startup looks like this:

Step 1: Conduct a thorough pre-startup inspection of the tower and its components

This includes checking for leaks, inspecting the tower structure and its supports, and ensuring that all valves and instrumentation are properly installed and functional. *This step is critical to identify any potential issues that could affect the startup process or lead to equipment failure later on.*

Step 2: Fill the cooling tower basin with water

The water source should be clean and free of contaminants, and the water level should be maintained at the recommended operating level. *This step is essential to ensure proper water flow and to prevent damage to the equipment due to dry running.*

Step 3: Start the circulating pumps

The pumps should be started one at a time and checked for proper operation. *This step is crucial to ensure proper water flow and to prevent issues such as cavitation or low water flow.*

Step 4: Add treatment chemicals

Add cooling tower chemicals such as biocides, corrosion inhibitors, and scale inhibitors to the water. These chemical treatments are essential to prevent microbial growth, corrosion, and scaling, which can cause damage to the cooling tower equipment. *This step is critical to maintaining good water quality and protecting the equipment from damage.*

Step 5: Adjust the water flow rate and fan speed

These settings should be adjusted based on the specific design and operating parameters of the cooling tower. *This step is important to optimize the cooling tower's performance and ensure maximum efficiency.*

Step 6: Monitor cooling tower operation continuously

This includes monitoring the water quality, temperature, and pressure, and checking for any abnormal conditions such as high vibration or unusual noise. *This step is critical to identifying any issues that may arise during the startup process and ensuring the proper functioning of the cooling tower.*