



***RYDLYME* CLEANING OF VACUUM FURNACES**

All water-cooled vacuum furnaces will function properly and efficiently if the cooling water circuits are kept clean and free of water scale deposits. An economical and expedient approach for removal of these water formed deposits from the cooling water circuit is to periodically clean them with ***RYDLYME***.

INSTRUCTIONS FOR *RYDLYME* CLEANING

1. Shut down all electrical components.
2. Release vacuum from chamber.
3. Shut off all water return and supply valves.
4. Drain all water from all circuits.
5. Break unions on water return and supply piping and attach circulating pump and hoses. (Note: If multiple furnace return hoses do not come back to a common header, you may place all the hoses in the circulating drum).
6. Attach suction and discharge hoses to the circulating drum.
7. After valves to all circuits are open and all drain lines are closed, prime and start your circulating pump.
8. After circulation of ***RYDLYME*** has been maintained for 15 minutes, slowly close all but one of the cooling water circuits and establish positive circulation in this one circuit. Valves to all other circuits are closed.
9. After an additional 15 minutes of circulation, open a second circuit and shut off the first circuit.

Proceed in this manner until all circuits have been individually circulated for at least 10 minutes each. Note: some circuits have more than one valve.



COOLING CIRCUITS

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|-------------------------|----------------------|
| A. Bottom cooling coils | G. Diffusion pump |
| B. Top cooling coils | H. Diffusion chamber |
| C. Vessel | I. Quick cool |
| D. Front end | J. VRT |
| E. Cold trap | K. Power terminal |
| F. Mechanical pump | |

10. Continue circulation through all circuits for an additional hour after all circuits have been individually cleaned.
11. During the cleaning, all hose connections and fittings should be periodically checked for leaks. Any leaks, if and when they do occur, should be repaired before proceeding.
12. During the *RYDLYME* cleaning there will be some foaming and gassing at the discharge hose. When this action stops, either all deposits have been dissolved into solution or the *RYDLYME* strength has been depleted. If the solution strength has been depleted, more *RYDLYME* should be added to completely clean the unit.
13. Upon completion of *RYDLYME* cleaning (approximately 4 hours total time), purge all expended *RYDLYME* solution from the circuits to sewer. This can be accomplished by running the discharge hose directly to a drain or sewer line while simultaneously running a water hose to the circulating drum.
14. Thoroughly flush all circuits with fresh water. This is a continuation of the purging process. When the water at the discharge hose runs clear, continue circulating fresh water for at least 15 minutes. You may want to isolate each individual circuit, as in steps 8 & 9, to insure a thorough flushing.
15. After the water flush is completed, make sure all valves are open to assure cooling water flow to the entire furnace.
16. Return the vacuum furnace to service.

Periodic *RYDLYME* cleaning intervals will depend on your water conditions, usage and temperatures encountered. When units are free of water scale deposits, the cool down period will be shortened and the entire unit will run efficiently.