

# Dynamic Descaler® Application Guide

## Vacuum Pump

**Cleaning Instructions:** Follow these instructions to remove water scale, lime, mud, and rust from the casting, rotor, hub, cones, and associated piping of your equipment.

1. Write down the “before” amp readings, cfm at vacuum capacity and the vacuum in inches of mercury.
2. Take the pump out of service.
3. Insert “blanks” in flanges of discharge and suction piping.
4. Remove the bottom drain plug and allow all water to drain from the pump casing. Place plug with a 1” PVC ball valve with a 1” male poly PVC cam lock fitting.
5. Remove top plug and add a 1” PVC ball valve with a 1” male poly PVC cam lock fitting.
6. Get a circulating pump and circulating tank. The pump should be a chemical magnetic or double diaphragm constructed of poly with the inlet and outlet fitted with a 1” PVC ball valve with a 1” male poly cam lock fitting. The circulating tank should be constructed of a poly or plastic with an in and out fitting with a 1” PVC ball valve with a 1” male poly cam lock fitting.
7. Get three (3) 1” chemical hoses. The length should be determined by each position of the vacuum pump and the circulating tank. The hoses should have 1” female poly cam lock fittings.
8. See drawing on the next page for set up.
9. Fill the circulation tank with water. Turn on the circulation pump and open the valves to get the circulation back into the circulating tank.
10. Circulate water into the vacuum pump to test for leaks. If no leaks, drain water from the vacuum pump.
11. With no leaks, you are ready to circulate the Dynamic Descaler into the vacuum pump. Fill the circulating tank with Dynamic Descaler. Turn on the circulating pump and open all valves. Add the prescribed amount of Dynamic Descaler into the circulating loop. In some instances water may be required to maintain circulation.
12. After 30 minutes of Dynamic Descaler circulation, turn the pump rotor 90 degrees by pulling on the drive belts.
13. Every 30 minutes thereafter, turn the rotor 90 degrees to assure a thorough cleaning of the interior part of the pump, including the hub and rotor.
14. After several hours of circulation, with intermittent turning of the rotor, the pump should be clean and the rotor should turn freely.
15. Shut off the circulating pump and add fresh water to the circulation container.
16. Restart the circulating pump and flush until water runs clear.
17. Check the pH of the Dynamic Descaler to see if it is neutralize.
18. Disconnect return hose and run to the drain.
19. Disconnect pump and all hoses. Remove all the blanks and flanges and reconnect all piping.
20. Open seal water valve. With the bottom valve open on the vacuum, flush the vacuum pump with seal water for about 45 minutes.
21. Return pump to service.
22. After the vacuum pump has stabilized, write down the “after” amp reading, cfm at vacuum capacity and vacuum in inches of mercury.

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