

EFFECT OF SERVICE WATER QUALITY

The temperature and quality of the sealing liquid (in this case water) can have a dramatic effect on both the performance and reliability of a liquid ring vacuum pump.

Cool, clean water should be supplied to the pump if available. The standard performance curves are based on actual tests performed with a seal-water temperature of 60° F. Temperatures above 60° F result in a capacity reduction. [For details, see related article on Effect of Service Water Temperature on the Capacity of Liquid Ring Vacuum Pumps.](#)

Avoid dirty water containing abrasives such as sand or other abrasive solids, as it will cause erosion of the internal pump parts.

Extremely hard water may result in the formation of scale deposits on the internal pump parts, which will reduce the clearances and may cause the pump to lock up. These scale deposits can be removed using a descaling fluid such as DEKKER Vacuum's Scale-Ex. Another preventative method is the installation of a water treatment system.

Guidelines for suitable water are:

- Minimum pH: 7
- Maximum chlorides: 10 ppm
- Maximum total dissolved solids: 200 ppm
- Maximum hardness: 200 ppm

If the water supply is a real problem, an alternative solution would be to use the DEKKER Vacuum oil-sealed liquid ring Vmax system which eliminates the use of water completely.

