



Liquid Ring Vacuum Pumps Technical Information Starting Torque

Starting Torque:

The starting torque for a liquid ring vacuum pump is very low. Usually standard electric motors can be safely used to drive this type of pump. Pump operational speed (any speed) is reached only if motor torque is greater than pump operating torque (see figure 1).

Operating Torque (Nm) is given by:

$$T = 9549 \times \text{kW} / \text{RPM}$$

Where kW is power absorbed by pump at full operating speed
RPM

Starting Torque can be calculated knowing the operating torque (T) and adopting the values given by curve 1 and curve 2 of Figure 2 below.

Curve 1 is to be used for pumps starting full water and service water supplied under pressure (extreme case to be avoided).

Curve 2 is to be used for pumps starting with water at shaft centerline and service water is being primed by the vacuum pump (t_s is starting time).

