



# VAC PUMPS

## WATER RING VACUUM PUMPS

The Water Ring (WRC) pumps are single stage models of simple and robust construction. The Pumps are direct coupled to the electric motors with no exposed shafts or belts. This makes the pump unit very compact and easy to install. Clean water is all that is required to create vacuum, lubricate and cool instead of oil. Operating noise levels are significantly reduced as the impellor does not come in contact with the outer body. The pumps can be set to either re-circulate or dump service fluid. The pumps have reduced noise and vibration levels and require minimal maintenance.



### OPERATING PRINCIPLE



Figure 1: Water Level - Pump at Rest

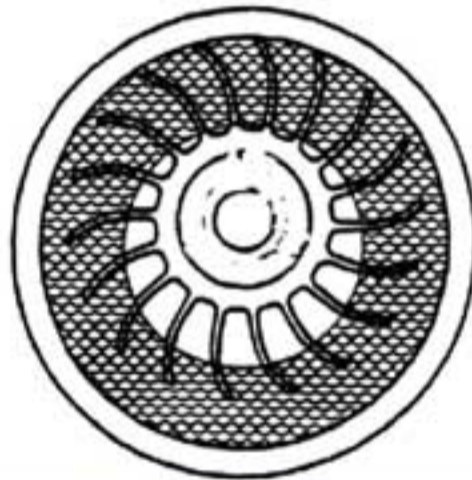


Figure 2: Water Level - Pump Rotating

1. Centrifugal force causes the water to form a rotating ring around the outside of the impeller blades.
2. Because the impeller axis and the body axis are offset, the water ring is offset to the impeller.
3. At the top of it's circle (moving anti-clockwise, the rotating ring of water almost touches the centre of the impeller. At this point the chambers formed by the impeller blades are almost filled with water. As the impeller moves down around the circle, the water begins to empty out of the impeller chambers.
4. Air flows into the emptying chambers to replace the water. This creates a suction.

DESCRIPTION	NUMBER OF CLUSTERS	MOTOR SIZE	LITRES/MIN FREE AIR	MODEL
WRC Series 2	16 – 28	7.5kW, 3ph, 50/60HZ 4 Pole	2000	VPA2300
WRC Series 3	30 – 36	11kW, 3ph, 50/60HZ 4 Pole	2950	VPA3100
WRC Series 4	38 – 48	15kW, 3ph, 50/60HZ 4 Pole	3800	VPA4000

### OIL LUBRICATED VACUUM PUMPS



The superior internal port design of the M and MXL Series vacuum pumps provides high airflow per kW. Heavy section cylinder with cooling fins ensures effective heat dispersion, minimising overheating, distortion and performance loss. Centrifugal force holds the vanes in positive contact with the pump cylinder for a uniformly tight seal.

The MXL Series vacuum pumps come standard with a high quality oil pump that delivers a precise amount of oil. The oil is delivered to the pump at a consistent rate, regardless of vacuum level or oil temperature.

### REGULATORS



The Mueller vacuum regulator delivers a high accuracy; stable and reliable vacuum which is essential to the consistent operation of the milking system. In modern, high airflow milking systems, such reliability is essential. Each Mueller vacuum regulator is manufactured and tested under strict factory conditions to meet ISO standards. Two models: Mueller 2800 and Mueller 4000.

#### KEY FEATURES:

- High accuracy and greater sensitivity
- Minimal vacuum consumption
- Robust and quiet design
- Easy and quick to install

### VACUUM GAUGES

Milfos offers a high accuracy vacuum gauge that can be finely calibrated under test conditions.

The gauge measures the vacuum level of the system in kPa. A vacuum level marker can be set at the right point as a guide to show the plant is operating at the correct vacuum level.

