The Milking Vacuum Pump Variable Speed Drive (VSD) Cuts Electricity Use

VSD operation

Milking vacuum pumps are sized to deliver the required maximum vacuum level to operate the milking and washing systems. Occasionally, when a milking unit falls off a cow’s udder or when there is a temporary system leak, high levels of vacuum are needed for short intervals. Normal milking operation uses less than half the maximum vacuum available. Before variable speed technology was used for vacuum pumps, dairy operators had to run their pumps at a constant high speed to perform adequately during the occasional short intervals of high vacuum need. The VSD determines exactly how much vacuum the system requires and regulates the speed of the pump. The result is a pump that runs at a much lower speed most of the time and requires substantially less electricity to do the job.

Stable vacuum

A constant vacuum level at the milking units is necessary to prevent bacteria from accessing the cows’ teats. A VSD reacts quickly and maintains a stable level as well or better than conventional systems.

Equipment life

A motor run at full speed will have a shorter life span than a motor that regularly runs at a lower speed. Since the VSD operates the vacuum pump at reduced RPMs, bearings and other internal components last longer and require less frequent maintenance. Pumps will require less frequent replacement.

Noise reduction

Conventional milking vacuum pumps running at full speed make a lot of noise. Many farmers benefit from significantly quieter milking areas.

Great financial investment

The energy and money savings from installing a VSD varies from farm to farm, based on the size and type of vacuum pump, the type of milking system, and the milking time. On some dairy farms, the substantial energy savings have made the payback period on the installed cost of the VSD as short as three years. Quick payback makes the VSD one of the best investments a dairy farmer can make.