

Pulse Reduction System



For Piston Diaphragm Pumps

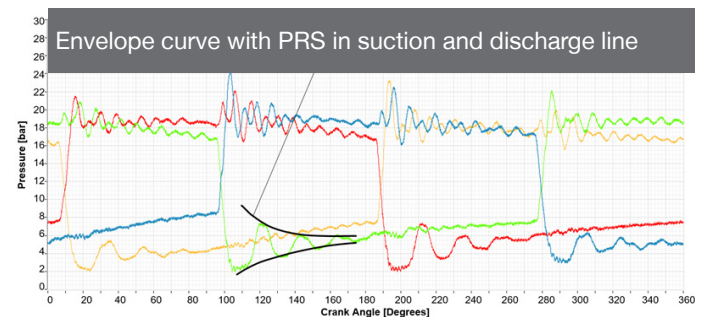
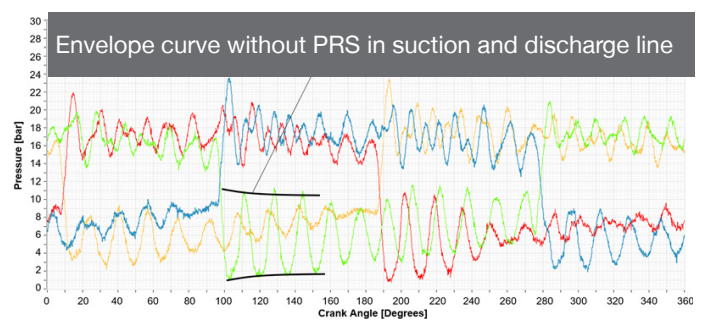
High pressure slurry pump operations always go along with high frequency pulsations, caused by physical circumstances. MHWirth's unique pulse reduction system (PRS) significantly reduces the risk for cavitation and fatigue failures of pump components.

Slurry pump operations are characterized by oscillating movements of the pump pistons. An accelerated, mass-adherent fluid which follows the laws of inertia in combination with delayed valve openings in the suction and discharge side of the pump, results in asymmetrical flows and leads to high-frequency pressure pulses and to vibrations.

Those pulsations are considered a water hammer effect, or pressure surge, travelling through the pump fluid end at the speed of sound at a frequency of approx. 15 - 30 Hz. The pressure amplitude is approx. 10 - 15 bar. This increases the risk for cavitation in the fluid as well as fatigue failures of pump components due to water hammers.

Our unique pulse reduction system compensates vibrations and converts the pulsation energy into heat, acting like a shock absorber. This allows smooth pump operation, even at high speeds.

This beneficial system is available both for new-builts as well as an upgrade for existing piston diaphragm pumps of all brands.



Benefits

- Minimize the risk for cavitation
- Minimize fatigue failures of pump components
- Easy to install
- Maintenance free
- Shut-off function
- Results can be monitored with MHWirth WPMS™

