In Chautauqua, the westernmost county in New York State, lies the quiet village of Brocton. Although an unassuming little town, it boasts the birthplace of the designer of the Pullman Sleeping Car, George Pullman, and offers some of the best wines from surrounding Lake Erie Wine country.

The Village of Brocton Water Pollution Control Facility (BWPCF) was built in 1983. It was originally designed to treat 237,000 gallons of wastewater per day with a number of upgrades completed over the past 30 years to treat additional wastewater from a growing community and the Department of Corrections Lakeview Shock Facility. These upgrades have made the facility one of the most modern wastewater treatment plants in the area, with a capacity of 658,000 GPD. Today, the facility utilizes the technology and treatment parameters of Active Sludge,
by means of Sequencing Batch Reactors (SBR’s). The wastewater is treated in a number of phases, all handled by only three full time employees.

In 1988, an ABEL model CM piston-diaphragm pump was purchased and installed as an integral component of the sludge dewatering system. The pump takes the underflow from the clarifier and sends the thickened solids to a high-pressure (225 psi) plate and frame filter press.

**OPERATION**

As pressure begins to build in the filter press, the pump’s CPR valve throttles back on the amount of hydraulic fluid supplied to cylinder between the piston and diaphragm. With less fluid in the cylinder, the stroke length of the diaphragm is reduced, thus decreasing flow. This inherent design of the model CM pump, mechanically reduces the flow as pressure increases without the requirement of Variable Frequency Drive (VFD). In addition, the decrease in hydraulic output results in a drop in the required electrical power required by the motor, thereby saving money.

As of 2015, The ABEL Compact Diaphragm Pump continues to deliver reliable service in its 27th year

**THE ABEL ADVANTAGES**

- High reliability where prolonged continuous duty is required
- Low wear with ideally rated diaphragm and product valve materials
- Up to 95% volumetric efficiency thanks to unique shape of diaphragm and housing
- Low maintenance due to minimal wear
- Dual-diaphragm design with leakage detection ensures reliability
- Hundreds of filter press feed installations worldwide
- Quality assurance according to ISO 9001