



## PARKS / CEMETERY / AQUATICS / CAMPGROUND

Park and Recreation

Oelwein.fun

**FROM:** Joshua Johnson MA Parks Superintendent

**TO:** City Administrator Dylan Mulfinger – Mayor Brett Devore – Oelwein City Council

**SUBJECT:** Aquatic Center Variable Frequency Drive, Controller, and Mag Meter

**DATE:** 05-11-2020

The City of Oelwein has chosen to have Lime Energy Company convert the lighting to LED lights at the aquatic facility that requires no upfront costs to the City. With the CIP funds available, the City would like to complete an energy and equipment saving variable frequency drive project at the aquatic center. Pool pumps consume a vast amount of energy. To reduce costs associated with water circulation, Variable Frequency Drives are now available to lower consumption that also extend the pump's motor life. Variable frequency drives (VFD) allow the pump to run at its most efficient point and maintenance costs drop due to motor protection, motor soft start and a significant decrease in water hammer protecting the shaft and impeller. Installing a VFD to your pump immediately lowers energy costs by 5 to 10 percent by simply dialing in the pump where it actually needs to be.

The Acu Drive XS™ offers built-in intelligence for increased performance in all aquatic pump applications. Specified to save energy, space, costs and time, the Acu Drive XS offers very fast return on investment. The Acu Drive allows the pump to run at its most efficient point on the curve. Preventative maintenance costs will drop due to motor protection, motor soft start, and a significant decrease in water hammer protecting the shaft and impeller. Up to an additional 5% savings due to the Acu Drive's ability to balance power phase and harmonic suppression. Built with powerful standard and optional features specifically designed for energy optimization, the Acu Drive is perfectly matched with the full line of Pentair Water Commercial Pool and Aquatics' pumps.

- Save up to 60% or more on pump's electricity usage
- "Right-size" your pump to the exact flow required
- Saves energy with constant flow as the filters gets dirty (with optional flow sensor)
- Off-hour flow management capability
- Does not blow corrosive filter-room air across the circuitry
- High efficiency up to 98% - adjusts drive input voltage for best efficiency point
- Eliminates need for motor starters
- Integrated disconnects, fusing and optional bypasses
- 2-step ramps (Soft Start Feature)
- Real-time clock for time based functions
- Overload trip protection protects motor and Acu Drive from Voltage Spikes and phase unbalance
- Can connect to an IntelliTouch system
- Up to a 6 year on-site warranty available
- Start-up available with every drive (technical training option available)
- Indoor & Outdoor-rated enclosures
- One drive type for the full power range



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### Quotes:

#### **VFD - 40HP, 3PH 460V with bypass      Standard 3 yr. factory warranty**

Carrico Aquatic Resources	\$9,203.00 + Shipping	+ \$800 install, startup, operator training	\$10,003
Pool Tech	\$8,986.00	\$880      6-year extended warranty	\$9,866

**BECSyS 5 Controller** - Comes standard with integral Ethernet port, RS232/USB PC connection port, and can be programmed to send alarm notifications by email and/ or text message. Included BECSys for Windows software provides operational data logs, graphs and event calendars. Also includes flow cell, sensors (ph, ORP, Temp), and safety flow switch and installation fittings. Manufacturer offers 5-year warranty on electronics and 2-year warranty on sensors.

Carrico Aquatic Resources	\$4,443.00 + Shipping	+ \$800 install, startup, operator training	\$5,243
Pool Tech	\$3,365.00		\$3,365

#### **10" Magmeter**

Carrico Aquatic Resources	\$1,773.00 + Shipping		\$1,773
Pool Tech	\$1,677.00	*If fitting is not needed subtract \$480.00	\$1,677

### Totals:

Carrico Aquatic Resources	<b>\$17,019</b>	Pool Tech	<b>\$14,908</b>
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#### **CIP Aquatics Funding:**

	<b>Budgeted</b>		<b>Planned</b>
Decking	\$5,301	Decking	\$4,196
LED	\$13,803	VFD	\$14,908
Shade	<u>\$7,800</u>	Shade	<u>\$7,800</u>
	\$26,904		\$26,904

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