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## Message from Mr. L&B

Spring is almost here, and we continue to make positive changes at Layne / Verti-Line. The biggest news is the addition of Josh Blanks, who is taking charge of our parts business. Josh brings a lot of energy to the position, which will improve customer service and provide creativity when trying to identify the correct replacement parts on older units.

In other news, motor price increases take affect April 1<sup>st</sup> on USEM VHS and VSS high thrust motors. Make sure any outstanding quotations to your customers are updated. If you need a USEM vertical motor catalog, please contact us for a copy or view the catalog online at [www.usmotors.com](http://www.usmotors.com).

We have also released updated price pages for standard vertical turbines. Included are corrections and the deletion of the 8T's, 10FH's, and 18GL from our line. We strive to provide up-to-date sales literature, selection software, engineering catalogs, price pages, and O&M manuals. Don't hesitate to contact us if you need any of these items.

Finally, I'd like to introduce you to our new company store. To start, we chose a small selection of quality items to feature our Layne / Verti-Line logo. Ordering is easy, and items ship quickly. See the ad included in this issue of the newsletter. Stay tuned for new items to be added in the future.

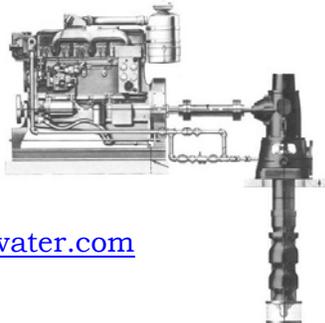
## New Parts Sales Engineer

We're pleased to announce that Josh Blanks has joined Layne / Verti-Line as our new Parts Sales Engineer. Josh recently graduated with a BS in Business Administration from Kansas State University. He has worked in residential remodeling and operated his own painting business while in college. You will appreciate Josh's attention to detail and excellent customer service. Josh will handle all Layne / Verti-Line parts quotes and orders. Please join us in welcoming Josh to his new position and the Layne / Verti-Line family.

## 2007 Firepump Pricing

Updated electronic estimate sheets are available for pricing electric and diesel vertical turbine firepumps. An updated version was sent out the beginning of January, and then a second version went out the middle of February that included a price increase with electric motors. Note that the current published hard copy price pages are out of date and should not be used.

Use these electronic estimate sheets to work up quotes and place orders. Remember to include the end user and location of the pump, as well as a signed setting plan with all orders. If you are an Aurora firepump distributor and would like to receive the latest electronic estimate sheet, please send an email to:



Carolyn Crews  
[carolyn.crews@pentairwater.com](mailto:carolyn.crews@pentairwater.com)

The latest version of the estimate sheets are:

Rev 11 2-12-07 VTFP ELECTRIC-AURORA  
Rev 11 2-12-07 VTFP DIESEL-AURORA

## Contact Information

### Layne & Bowler/ Verti-Line

#### Address

3601 Fairbanks Ave.  
Kansas City, KS 66012

**FAX** (913) 748-4030

#### Website (all go to one site)

[www.laynevertiline.com](http://www.laynevertiline.com)  
[www.vertiline.com](http://www.vertiline.com)  
[www.laynebowler.com](http://www.laynebowler.com)  
[www.lvlpump.com](http://www.lvlpump.com)

### Pump Sales, Technical Support, Newsletter

Chris Lula, P.E.  
(913) 748-4254 phone  
[chris.lula@pentairwater.com](mailto:chris.lula@pentairwater.com)

### Parts Sales & Order Entry, Tech. Support

Josh Blanks  
(913) 748-4255 phone  
[josh.blanks@pentairwater.com](mailto:josh.blanks@pentairwater.com)

### Order Entry (Pumps Only)

#### South, West, & Midwest

Carol Hampton  
(913) 748-4224 phone

#### East, Canada, and Firepump

Eddie Fears  
(913) 748-4282 phone

[LVProduct@pentairwater.com](mailto:LVProduct@pentairwater.com)

(913) 748-4030 fax

### Order Status (US & Canada, Pumps Only)

Connie Groves  
[LVDeliveries@pentairwater.com](mailto:LVDeliveries@pentairwater.com)

### Warranty and Field Service

Sara Swofford  
(913) 748-4212 phone  
[sara.swofford@pentairwater.com](mailto:sara.swofford@pentairwater.com)

## Specifications Department

This issue, we'd like to introduce you to our Specifications Department. This is where a pump order begins to materialize. Just some of the functions performed by our Specifications Department include:

- Review purchase orders and job specifications to ensure correct pump is supplied
- Create & check submittals and O&M's
- Create and check bills of materials
- Perform calculations for lengths of column and shafting
- Send requests to our Engineering Department for job specific components.
- Create shop work orders for fabrication and machining.

Our Specifications Department has six key people that we depend on at the Kansas City Plant.

- John Fine handles all of our large contract orders.
- Jim Hutchins works on all buy-sell orders, which includes many replacement pumps. Jim occasionally handles a large contract job as well.
- Judy Evens releases all standard product orders that are directly from the price book.
- Henry Lawton processes all firepump orders.
- Lance Wright loads and structures new parts in our system so that the finished part is machined from the correct casting.
- Jennifer Justice has recently joined our team and is training to work on contract, non-contract, standard, and firepump orders. The knowledge she's learning will provide a valuable backup to help expedite orders to production.

Though they may never interact directly with customers or distributors, they work behind the scenes to ensure orders are accurate when released to production.

## Snapshot in History

Taken in the mid 1950's, these pictures are of a Layne & Bowler pump display at a county or state fair to advertise their use for irrigation.



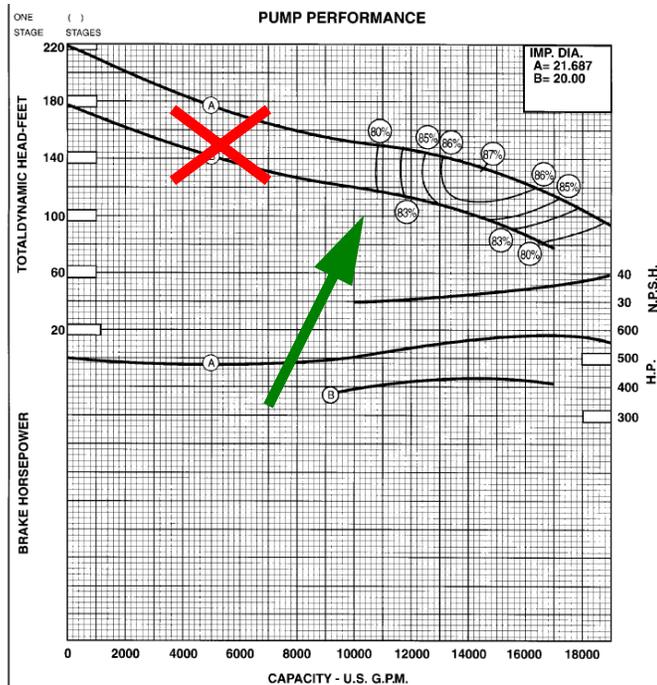
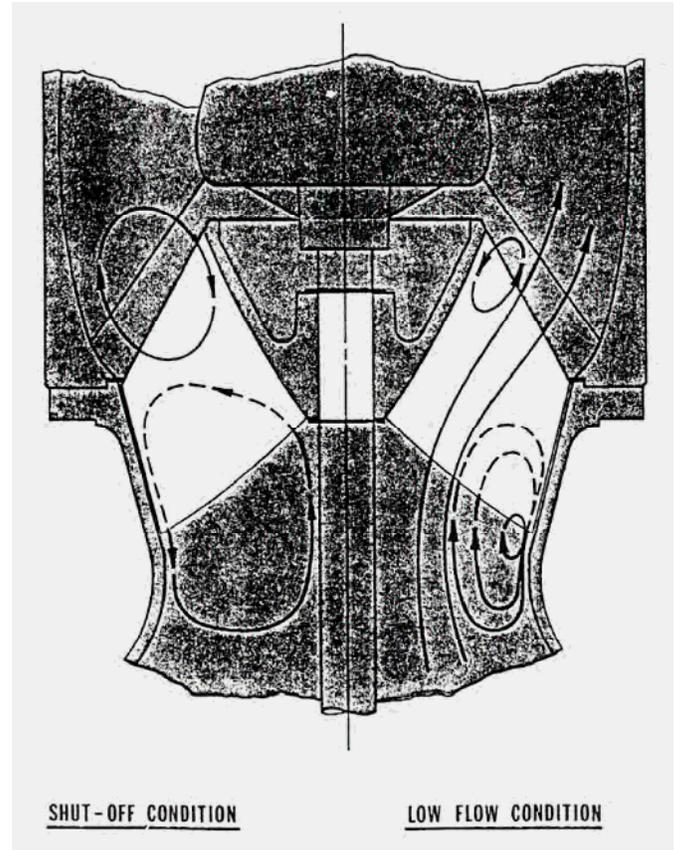
## Technical Q&A

*Question: How far to the left of BEP can I operate a pump?*

Following the guidelines set forth by Hydraulic Institute, there is a **preferred** operating region (POR), and an **allowable** operating region (AOR). When operating within the POR, the pump service life is not significantly affected. Guidelines for this region are based on specific speed of the pump, and may be found in section 9.6.3.1 of HI Pumps.

The AOR region covers a wider range of flows and is typically determined by the pump manufacturer. When operating in the AOR, the service life of the pump will not be seriously compromised, but may be less than when operating in the POR. When analyzing Layne / Verti-Line published curves, AOR is between the first and last ISO-efficiency lines.

To answer our initial question, the curve below shows the first iso-efficiency line around 10,800 gpm. Anything to the left of this line would be outside the AOR. When operating to the left of 10,800 gpm, recirculation wear can occur on the inlet side of the impellers and bowl vanes (see illustration to the right).



## Website News

We are pleased to witness a tremendous increase in traffic on our website since its creation in June, 2006. The amount of unique visitors and the number of visits has more than tripled in the second half of 2006. This indicates that our customers have found the available information useful. Just some of the items with a high volume of traffic:

- H2Optimize
- Electronic pricing program for distributors
- Vertical turbine catalog
- O&M manuals
- Cutsheets

Our goal is to maintain the website with the most up-to-date information, as well as provide data to help customers with existing installations.

## Pumps Around the World

**1957 -** Verti-Line builds one of the largest vertical turbines to come out of their California facility. Though tagged as a model 46FHL, actual bowl and bell diameter measures 53 inches. These 2 stage units produced 28,000 gpm @ 150 ft TDH. Hydraulically balanced zincless bronze impellers were provided to minimize downthrust. The 46FHL design was modeled up from Verti-Line's 12FHL.



Creole Petroleum Corporation purchased these first 46FHL units and destined them for Venezuela. The service? Pumping crude oil.



**Fast Forward to 2006 -** Nearly 50 years later, Layne / Verti-Line received a request for quote to replace and duplicate the original 46FHL Venezuela pumps.

Dave Rindom, Manager of International Application Engineering for Pentair's Kansas City Plant, researched Verti-Line archives for the original pump record and associated drawings. After obtaining current casting and machine costs, Dave prepared a quote for the complete pump. The quote is directed through Tecnotrack, our Layne / Verti-Line distributor located in Caracas, Venezuela.



### Grand Island 46FHL

Records indicate at least 2 other installations exist for the 46FHL: Mekoroth Water Company in Tel Aviv, Israel, and the Burdick Power Station in Grand Island, Nebraska. Located just one state over, I was curious if the Grand Island pumps were still operating. I called Doug Hutcheson at Hutcheson Engineering Products in Omaha. Doug has been an Aurora / Verti-Line distributor for a number of years and I knew he would have a contact at Grand Island.



A phone call later, I was in touch with Larry Keown, Plant Superintendent for the City of Grand Island Burdick Station. Larry confirmed that the old Verti-Line's were still in operation for the power plant's cooling towers. Originally installed in September, 1971, these 46FHL single stage units are rated for 20,700 gpm @ 66.4 ft TDH. The pumps are driven by 450 HP motors turning 505 rpm at full load.

*Pictures courtesy of Larry Keown, Burdick Station in Grand Island, Nebraska*



## Pentair Water

# COMPANY STORE

### Rollerball Pen

Marble Green Danish Round Rollerball Pen with Pocket Clip, Brass Gold Accent and Layne/Verti-Line Logo in Gold  
Item #LVDRNG

1-25: \$4.00 each, 26-50: \$3.80 each, 51+: \$3.60 each



### Twill Ball Cap

100% Cotton, 6 Panel, Garment Washed, Unstructured Cap with Sewn Eyelets, Cloth Backstrap and Tri-Glide Buckle, LVL Logo Embroidered in Hunter Green  
Item #LV897

1-12: \$7.75 each, 13+: \$7.25 each

### Black Pique Polo

Pique Knit Black Short Sleeved Polo in 100% Ring Spun Combed Cotton, Welt Collar and Cuffs, 7 oz. heavyweight with Embroidered LVL Logo

Item LV420

1-12: \$20.50 each, 13+: \$19.50 each

Add \$3.00 each for 2XL, add \$4.00 each for 3XL



### 11-In-1 Multi-Tool

This 2-1/2" X 3/4" 11-Piece Giftcor Stainless Steel Tool Features Micro Pliers, Needle Nose Pliers, Wire Cutter, 2 Flathead Screwdrivers, Phillip Screwdriver, 2 Knives, Nail File, Bottle Opener and Scissors in Pouch with Logo  
Item LV053

1-25: \$6.30 each, 26-50: \$6.00 each, 51+: \$5.70 each

### Marble Ironstone Mug

Features a Large C Handle, 12 oz. Capacity, White Marble with the Layne/Verti-Line Logo in Green

Item LV45123

1-24: \$4.00 each, 25-48: \$3.70 each, 48+: \$3.45 each



To order Layne/Verti-Line Company Store items contact the Marketing Services Desk by email at [layne\\_info@pentairwater.com](mailto:layne_info@pentairwater.com), or by fax at 913/748-4030. Please note, the above prices do not include applicable sales tax or actual shipping charges.