

LIQUID LINE



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The New HMD Kontro CSA Pump with *Best-In-Class* Technology

Liquid Handling Equipment, Inc. is extremely proud and very excited to introduce the new HMD Kontro Chemical Service ASME Frame 1 Pump! The original GSA Frame 1 was designed 27 years ago before the development of the ASME B73.3 pump.

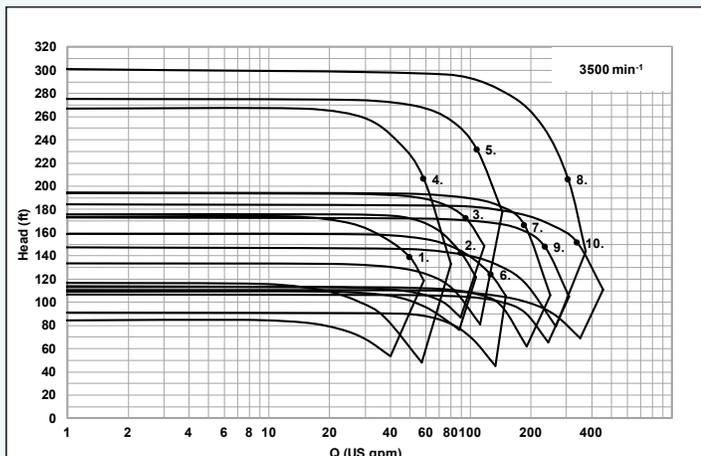
HMD has redesigned the ASME B73.3 pump based on the requirements of the existing 2015 edition. To date, it is internationally recognized as the standard for "Sealless Centrifugal Pumps for Chemical Process".

The new CSA Pump is engineered using "Best-in-Class" sealless technology. Its new design, as well as its features, are configured to overcome the existing limitations of current chemical service pump ranges. The CSA1 has been designed for quick and easy assembly, installation, and maintenance.

The CSA Frame 1 Pump dimensionally conforms to the ASME B73.1 standard to replace mechanically sealed pumps, making it an easy upgrade from sealed to sealless. CSA1 pump casings are also interchangeable with current GSA1 pumps, creating another easy upgrade path from GSA to CSA, without the need to unbolt suction and discharge pipe work.



CSA Frame Pump 1



CSA Family Curve 60Hz

REFERENCE	HYDRUALIC
1	K3 (1.5x1x6L)
2	K1 (1.5x1x6)
3	K1H (1.5x1x6H)
4	K6 (1.5x1x8L)
5	K5 (1.5x1x8)
6	K2 (3x1.5x6)
7	K2H (3x1.5x6H)
8	K7H (3x1.5x8H)
9	K4 (3x2x6)
10	K4H (3x2x6H)

With its simple back pull-out design, casings can remain installed while the back end of the pump is removed. Also, the primary containment liquid end of the pump can remain connected and undrained while the drive end of the pump is removed.

Liquid Line Editor:

Eric Sant

Vice President of Marketing

Published by:

Liquid Handling Equipment, Inc.
2311 Executive Street
Charlotte, North Carolina 28208

Mailing Address:

P.O. Box 668525
Charlotte, NC 28266-8525

Phone:

704-399-8700 • 800-872-8414

Fax: 704-393-2412

Website:

www.liquidhandlingequip.com

Email: lhe@liquidhandlingequip.com

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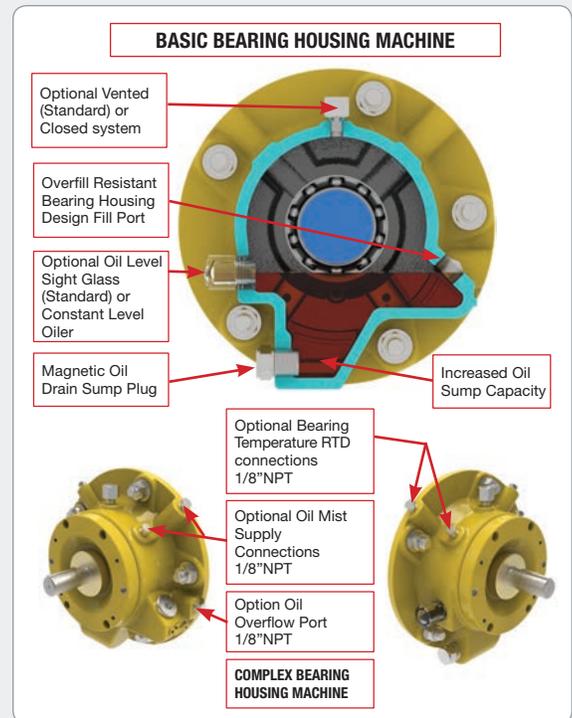
The New HMD Kontro CSA Pump with Best-In-Class Technology

Pumps are offered with stock availability in closed-coupled configurations. In addition, long coupled configurations up to 500°F are available. The Zero Loss Coupling and Shell are also in stock with available options up to the 248°F process range. The new CSA Frame 1 affords the same solids handling as that of the GSA with 5% w/w, with sizes less than 150 micron and liquids 0.1 to 200 cSt viscosities. Currently, the CSA is only offered here in the U.S. in Standard 316SS with 275 PSI/18.9 Bar Maximum allowable pressure.

Significant key design features, different from the current GSA include:

- The SiC bushings are installed in a pressed fit, rather than heating the bush holder to “drop in”, making the CSA1 much easier to repair.
- There is a built-in vortex breaker within the crown in both metallic and Zero Loss Shells to eliminate shell erosion.
- The bearing frame comes standard with an oil-level sight glass as opposed to the constant-level oiler on the GSAs. This appreciably aids in preventing over-fill issues.
- There also are optional secondary control and secondary containment sealing configurations.
- The bearing frame housing is standard with plugged 1/8” NPT connections for bearing temp RTD connection, Oil Mist supply connection, and an oil-overflow port.

Contact Liquid Handling Equipment for more information on the new CSA!! We are stocking pump quantities of four to eight in each size and configuration. We also offer complete CSA pumps with 300# flanges upon request.



An Essential Liquid Handling Equipment Update

Liquid Handling Equipment, Inc. has been deemed an *essential business operation* per the state of North Carolina and U.S. Government guidelines. As an industrial distributor supplying products to businesses that support emergency services and critical infrastructures across the United States, we will remain open during this challenging time to fulfill such needs.

Liquid Handling has consigned guidelines for our employees that meet or exceed the restrictions established by each state regarding social distancing, work-at-home, or shelter-in-place orders. We will continue to follow these guidelines as we navigate our way through the COVID-19 pandemic. Employees in the Charlotte office will continue normal operations to meet customers’ demands whose operations are critical and essential to the nation’s infrastructure. Please know that the guidelines do not preclude our commitment to employee safety as we continue to monitor the situation at every operational level.

Please let us know how Liquid Handling Equipment can assist you during this unprecedented time.



Technical Spotlight on: How Well Aligned Are Your Motor and Pump?

By John Hickner



John Hickner
Mechanical
Engineer

Unfortunately, a common refrain often heard in regards to fluid handling is, “There is something wrong with your pump.” This statement by a third party assessing the situation is usually followed by a list of problems, such as: the couplings are failing, the shafts are breaking, and the parts are wearing out exponentially faster than they should.

There are times when the pump is at fault, but more often the problem is the result of poor installation. When troubleshooting, a common issue frequently observed by Liquid Handling Equipment is the pump and motor were not properly aligned at the time the process piping was first installed. Misaligned pumps and motors can lead to excessive wear on components. To circumvent the costly, inconvenient root problem of misalignment, let’s explore the different methods for aligning a pump and motor.

The first method is the use of a straight edge or scale to make sure the coupling and shafts are properly aligned. Without question, this method is the least accurate. Reasons for not using a straight edge or scale would be limited equipment, limited time, and / or limited experience.

The next method for alignment of a pump and motor is the use of a Dial Indicator. When performing this method, obviously a dial indicator is needed in order to check the radial and angular alignments. Also with the dial indicator, it is necessary to manually turn the shaft of the pump to get the readings. After acquiring the readings, specific formulas are used to determine how much to move the pump both vertically and horizontally. One of the reasons for using this method instead of a straight edge is increased accuracy. Some of the disadvantages are: 1) it is time consuming; 2) it requires a high level of skill/knowledge; and 3) there is a possibility for human error.

The most popular, as well as the most accurate method of aligning a pump and motor, is the use of laser technology. When using lasers for alignment purposes, begin by setting up a transmitter (on the shaft of the pump) and a receiver (on the shaft of the motor), and then connecting the two to the display unit that will do the processing. With the pump and motor coupled together, the shaft is rotated and the CPU processes the information to output a real-time visual of how misaligned the pump and motor are. This method is far superior because of: 1) time saved, 2) ease of use, and 3) accuracy. The only disadvantages to laser alignment are the initial cost to purchase the setup and the education that is at first needed to begin applying it.

The good news is because Liquid Handling Equipment laser aligns every pump assembly designed and fabricated at our facility, we eliminate failed couplings, broken shafts, and worn-out parts at your end. We do advise realignment of the assembly once it is installed in the process piping.



Laser Alignment



A Liquid Handling Equipment Success Story

by Craig Sigler



Craig Sigler
Outside Sales

A fibers (Monofilament) manufacturer experienced ongoing issues with a Goulds 3196 mechanically-sealed pump employed for unloading chemicals from a tanker truck. There were repeated mechanical seal failures, along with the occasional annoying hassle of product leakage.

The cost of labor hours to rebuild the pump with a new mechanical seal, as well as the cost of the seal itself, was straining the plant's maintenance budget. The customer was in urgent need of a solution with a guarantee of a reliable pump to eliminate downtime and to lower equipment and maintenance costs.

Once the application was explored and the challenges were established, Liquid Handling Equipment recommended the HMD Kontro Mag-Drive Sealless Pump as the indispensable solution. As a certified Master Sundyne Distributor of the Mag-Drive, Liquid Handling maintains HMD Kontro inventory at our facility in Charlotte, NC.

The customer provided the conditions of service in order to successfully replace the Goulds mechanically-sealed pump. As such, we were able to match the specifics of the existing problematic pump to the recommended HMD Kontro GT-model pump. The dependable GT employs the famous HMD Kontro sealless technology, completely eliminating the problem-ridden mechanical sealing.

When there is a seal failure, sealless technology ensures that there will be no product leakage. It also spares fluid-handling companies the expense and inconvenience of replacing mechanical seals.

Liquid Handling Equipment in partnership with the HMD Kontro representative tested the GT pump for proper sealing without leaks and to ensure discharge pressure was equal to that of the Goulds 3196 mechanically-sealed pump.

The HMD Kontro G18 pump is successfully performing without any issues to date. The GT sealless pump solved the plant's safety concerns, reduced maintenance costs, and eliminated the need for seal support accessories. Most important, the plant's maintenance budget now easily allows for other pressing plant issues to be more readily addressed.

Liquid Handling Equipment now has a customer with ongoing needs. Plant management is developing a program to replace all of its Mechanically-Sealed Pumps with the HMD Kontro Magnetically-Driven Pumps.

Give your local Liquid Handling Equipment representative a call to explore the reliability, long-term affordability, and overall convenience of an HMD Kontro Sealless GT Pump!



Meeting Your Process Needs

Liquid Handling Equipment carries a full line of products to meet all of your process needs.

Tanks & Heat Exchangers

- Allen Industries, LLC
- Bendel Tank & Heat Exchanger
- Modern Welding
- Poly Processing Company
- Sharpsville Container

Pumps

- Crane Pumps - Barnes / Burks / Crown / Deming / Weinman
- DESMI / Rotan
- Ebara
- Flux Pumps
- HMD Kontro / Sundyne
- Iwaki-America
- LC Thomsen
- Price
- Roper
- Walchem
- Watson-Marlow / MasoSine Pump
- Watson-Marlow Sanitary Process Pumps
- Yamada America
- Zoeller Pump Company

Agitators

- MixMor Corporation

Filtration

- Eaton / Hayward MFG
- Harmsco
- Pentair
- Strainrite

Flow & Liquid Level Management

- FLOWLINE
- ICON Process Controls, Ltd.
- Niagara Meters

Accessory Equipment

- Blacoh Fluid Products
- Dixon
- Garlock Sealing Technologies
- Novaflex
- OPW / Civacon Corp.