



Hydraulically Driven Pumps

Hydraflo™



...
Moving Water Worldwide - Reliably and Efficiently

Hydraflo Pumps from MWI

The Hydraflo is a patented, submersible pump that uses the power of hydraulics to drive the impeller via flexible hoses. This replaces a fixed motor, a long, rigid shaft and the supporting structure common to most pumps that can move very large quantities of water. The unique design allows the pump to be set up in hours - not months - usually eliminates most of the civil works necessary for installation - saving a lot of money and time, allows the pump to be portable and provides variable speed control.

Advantages ●●●

Versatility

Hydraflo pumps can be installed at any angle - vertical, horizontal or any angle in between, by simply changing the intake bell.

Fast Installation

Hydraflo pumps can be installed within a fraction of the time of conventional lineshaft pumps. A typical installation can be done in house, because they do not require any critical alignment or the extensive civil works required by other high capacity pumps.

Designed for Longer Life

Hydraflos are designed for a very long life. All components are picked for ruggedness and durability. Many Hydraflos over 25 years old are still in daily use.

Less Submergence Required

Because the standard design of MWI Hydraflo pumps have large intake passages and low speeds, they can be installed and operated continuously at minimal submergence.

Requires Less Maintenance and Costs Less to Operate

The Hydraflo is a simple, straightforward design that requires very little maintenance. When used in portable mode, pumps more water for less money and has a smaller footprint than the many centrifugal pumps that would be required to take its place. Hydraflo pumps are designed to run dry without damage to their components.

Variable Speed Pumping

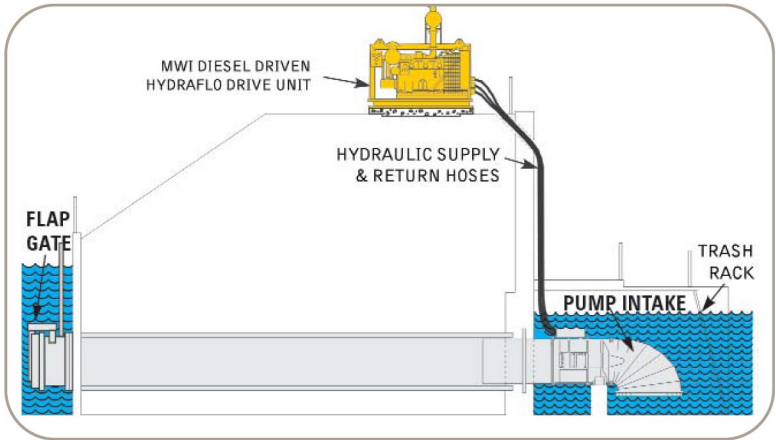
Pump speed can be varied manually by regulating engine speed. An automatic variable speed option is also available.

Environmentally Friendly

We offer several hydraulic fluid options which are readily biodegradable and meet the EPA toxicity limits. Hydraflo hydraulic tanks are small and have an engine shut down switch activated by small amounts of fluid loss.

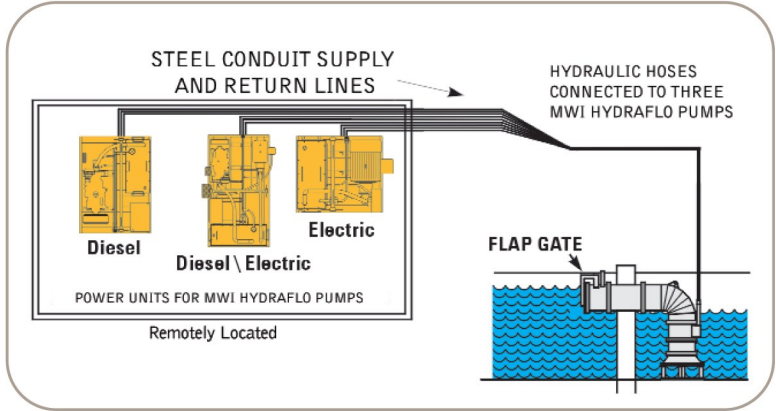


Installations ...



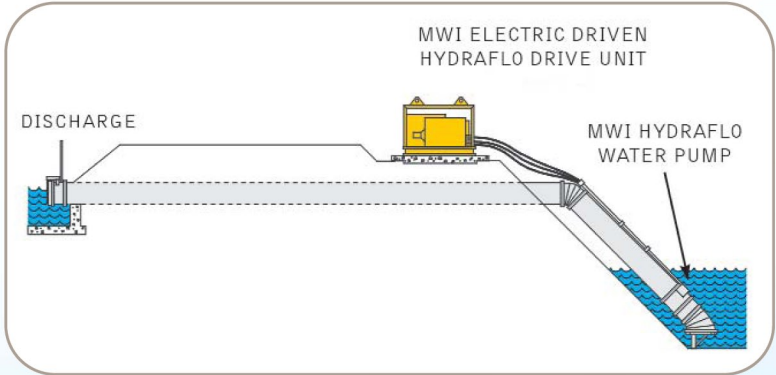
HORIZONTAL INSTALLATION

- Low profile
- Retro-fit existing pipe



VERTICAL INSTALLATION

- Dual power for emergencies
- Remote drive unit

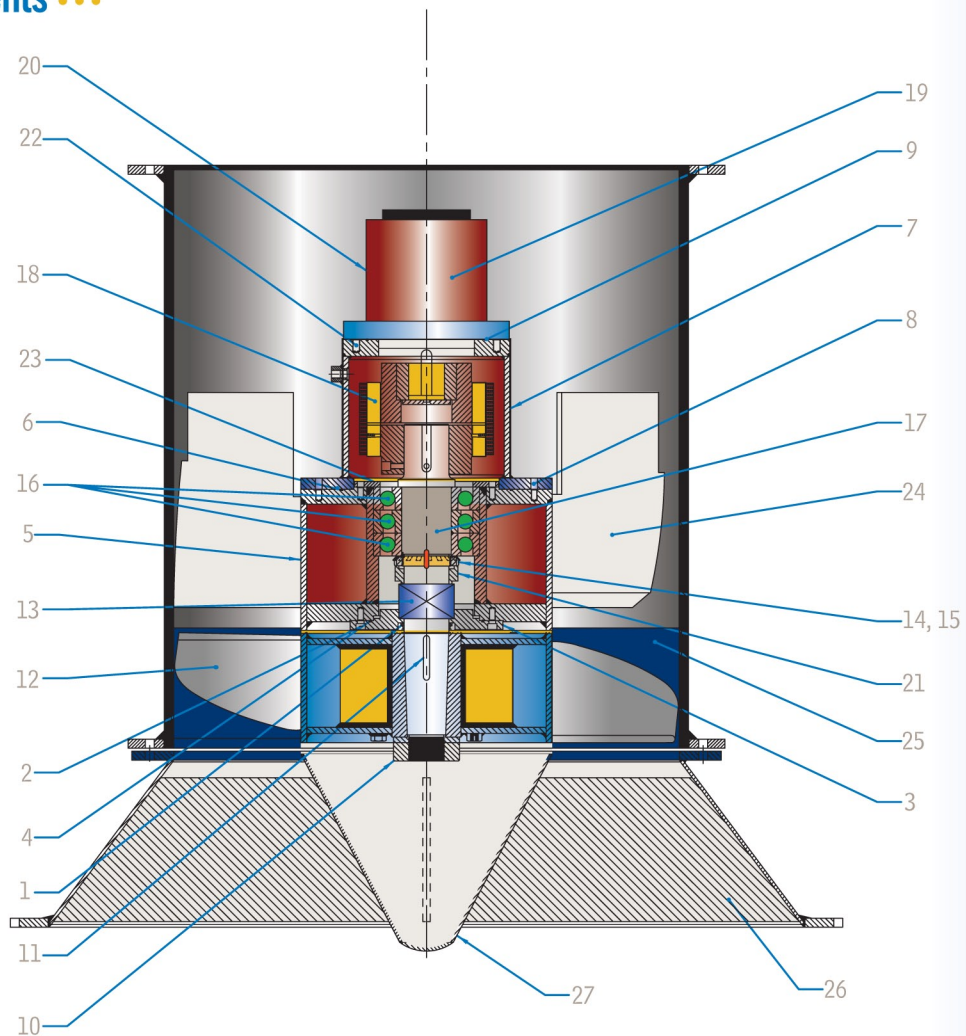


ANGLED INSTALLATION

- Low civil works
- Installable at any angle



Internal Components ●●●



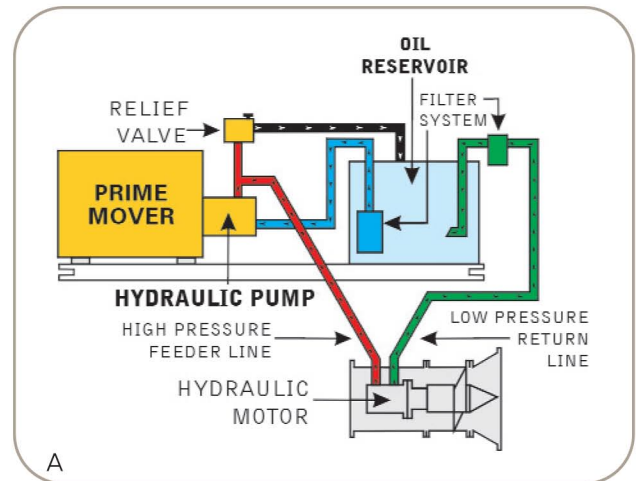
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|----|---|----|--|
| 1 | Lip Seal (Synthetic Rubber & Stainless Steel Garter Spring) | 16 | Bearings |
| 2 | Bolts:Fasten End PI-Bearing Box(Grade 5) | 17 | Hydraflo Shaft (304 Stainless Steel) |
| 3 | End Plate (ASTM A588, Corten Steel) | 18 | Shaft Coupling Assembly (Steel) |
| 4 | O-Ring: End Plate / Bearing Box | 19 | Hydraulic Motor (Steel Casting) |
| 5 | Bearing Box (ASTM A588, Corten Steel) | 20 | Mounting Flanges/ Adapters |
| 6 | O-Ring: Bearing Box / Motor Mount | 21 | Bronze Spacer (Bronze 660) |
| 7 | Motor Mount (ASTM A242 Corten Steel) | 22 | Bolts -Hydraulic Motor To Mount (Grade 5) |
| 8 | Bolts:Motor Mount-Bear'g Box (Grade 5) | 23 | Bearing Retainer (ASTM A242, Corten Steel) |
| 9 | O-Ring: Motor Mount / Hydraulic Motor | 24 | Distributor Blades (ASTM A242, Corten Steel) |
| 10 | Propeller Nut (AISI 1026 Steel) | 25 | Wear Ring/Liner (304 Stainless Steel) |
| 11 | Propeller Key (AISI 1018 Steel) | 26 | Guide Blades |
| 12 | Propeller(S/ S Blades,A588 Corten Steel) | 27 | Guide Hub |
| 13 | Mechanical Seal Assembly (Ceramic & Stainless Steel Spring) | | |
| 14 | Bearing Lock-Nut (ANSI C1015 Steel) | | |
| 15 | Bearing Lock-Washer (ANSI C1015 Steel) | | |

Due to our continual improvement of our products, we reserve the right to change designs and specifications.

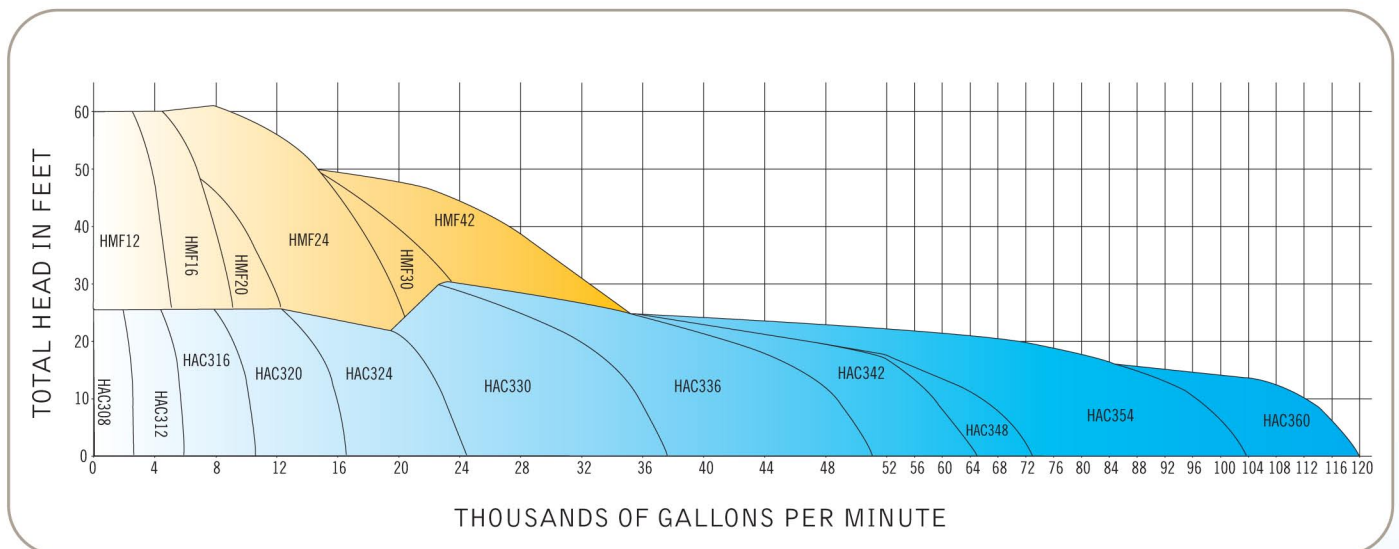
Method of Operation ...

Schematic A shows how the hydraulic system works. Note that the prime mover can be a diesel engine, electric motor or a combination of both. It drives a hydraulic pump which in turn supplies oil to the hydraulic motor in the water pump. This spins the hydraulic motor which is directly connected to the propeller. The hydraulic oil is then returned to the oil reservoir through the return filter. Then, the hydraulic oil returns through a strainer and back to the hydraulic pump, completing the circuit.

A relief valve from the high pressure side to the oil reservoir, serves to by-pass the power transmission fluid and divert flow in the event that an object gets lodged in the propeller. This is a very important safety feature available only with Hydraflo systems which protects all components from shock loads. Where variable flows are needed (such as in sewage effluent or "piped in" stormwater pumping), the propeller speeds can be infinitely adjusted automatically through the hydraulic power transmission system to match up with any combination of water flows and head conditions.



Performance curves for each bowl size are available upon request.





MWI's international headquarters and extensive manufacturing capabilities are located in Deerfield Beach, Florida, very close to the original business. The manufacturing facilities are spread over 4 city blocks and total nearly 300,000 ft², to include a 10,000 ft² test lab. The company has a facility in Egypt and representatives throughout the United States, Latin America, Middle East, Africa and Asia.

The Hydrflo™ is protected by one or more of the following patents and patents pending:

US Patents: #4,138,202, #6,447,260,
#6,520,750, #4,188,788, #6,113,356,
#4,350,476, #4,138,202, #3,907,463,
#4,070,135, #4,797,067, #3,270,677



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MOVING WATER INDUSTRIES
INTERNATIONAL HEADQUARTERS

201 N. Federal Highway Deerfield Beach, Florida 33441 USA
Phone: (954) 426-1500 Fax: (954) 426-1582 E-mail: info@mwicorp.com www.mwicorp.com