

Hidrostand™

Hidrostal's Hidrostand™ allows the installation of a Hidrostal Centrifugal Screw Pump in a comparable location as a conventional wastewater pump and also improves suction performance and lowers overall height.



Hidrostand™

The Hidrostand Hidrostand is made of durable cast iron and includes an inspection port. The design provides smoother and more uniform flow into the impeller while minimizing the required height of vertical installations. It's low profile allows a screw centrifugal impeller pump, with its characteristic long suction housing, to be installed in the same space as a conventional wastewater pump.



There has always been a challenge when moving fluid from a horizontal pipeline into the impeller of a vertical pump. From a mechanical standpoint it is beneficial to keep the pump center of gravity as low as possible. From a hydraulic standpoint it is optimal for the flow entering the pump to have a uniform and smooth profile. Having an elbow mounted directly to the suction of a vertical pump keeps the height as low as possible when connecting to a horizontal pipe. Having a number of straight pipe lengths between this elbow and the pump suction optimizes the flow entering the pump. These two requirements have always worked against each other.

If a horizontal installation is not possible, one way to keep the pump height low is to use an elbow directly connected to the pump suction. Unfortunately this produces an abrupt change in flow direction which disturbs the flow and creates turbulence and eddies. This results in both a pressure loss and an asymmetric flow into the impeller. These factors can produce symptoms such as increased loads on the pump & bearings, decreased NPSHa, decreased pump efficiency, cavitation, and high vibration. All of these items will lead to an increase in life cycle costs. While an elbow does aid in bringing the overall installation height and center of gravity down, the tradeoffs often exceed the benefits.

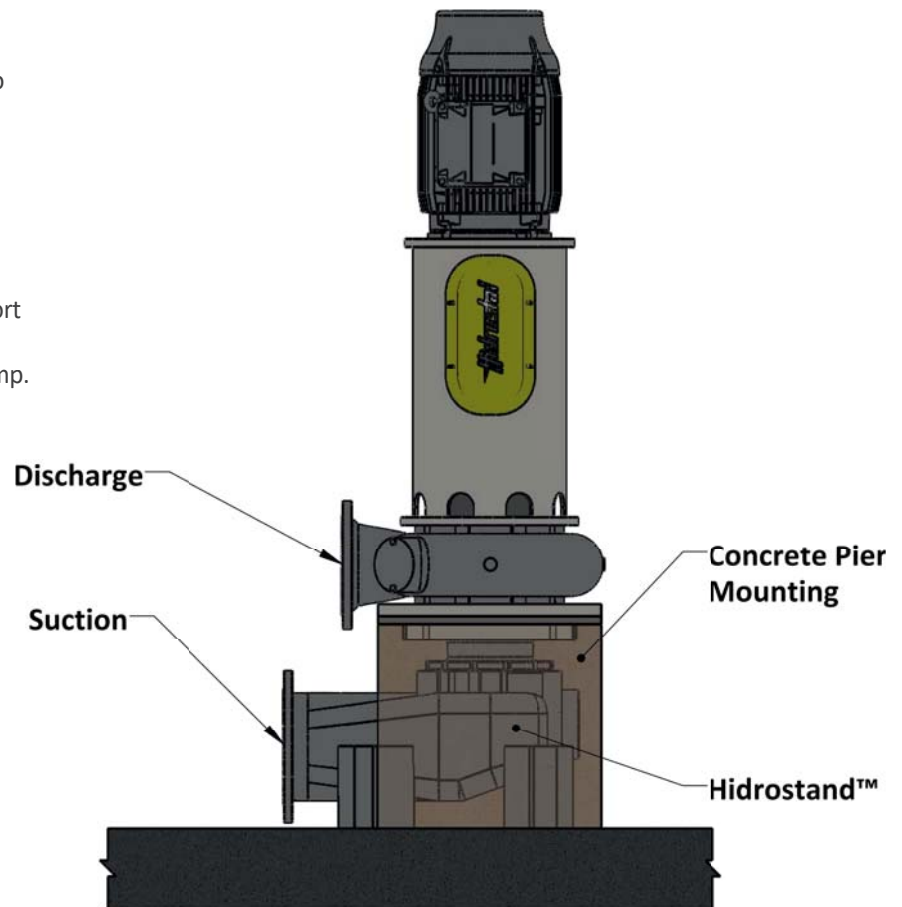
The Hydraulic Institute (HI) has recognized the potential of elbows (and other fittings) on the suction side to adversely affect the pump hydraulics. (ANSI Standard 9.6.6-2016) In the case of elbows, from a standpoint of hydraulic disturbance long radius elbows are better than short radius and long radius reducing elbows are still better. While recognizing that due to geometric constraints pump companies must at times supply vertical pumps with elbows directly connected to the suction, the standard states that in this case it is the responsibility of the pump manufacturer to insure successful operation. Optimally, the standard provides, except for a long radius reducing elbow with a reduction in flow area of more than 50%, specific numbers of recommended straight pipe lengths between an elbow and the pump.

In order to eliminate the hydraulic and associated mechanical problems that can occur when an elbow is directly connected to the pump suction, and to also minimize the height of a vertical pump installation, Hidrostand has developed a solution that provides a smooth flow transition into the pump suction while minimizing the required installation height. This solution is the Hidrostand Hidrostand that minimizes turbulence and provides optimal suction conditions at the pump inlet.

Product Highlights

Advantages

- Allows the Hidrostral pump with its long impeller to be retrofitted to existing stations.
- Integral port for inspection and cleanout.
- Mounting bolt circle allows 360 degree discharge orientation.
- Fewer fasteners and components compared to an elbow and its mounting hardware.
- Made of heavy-walled gray iron designed to support the pump and motor assembly.
- Provides nearly ideal suction conditions to the pump.



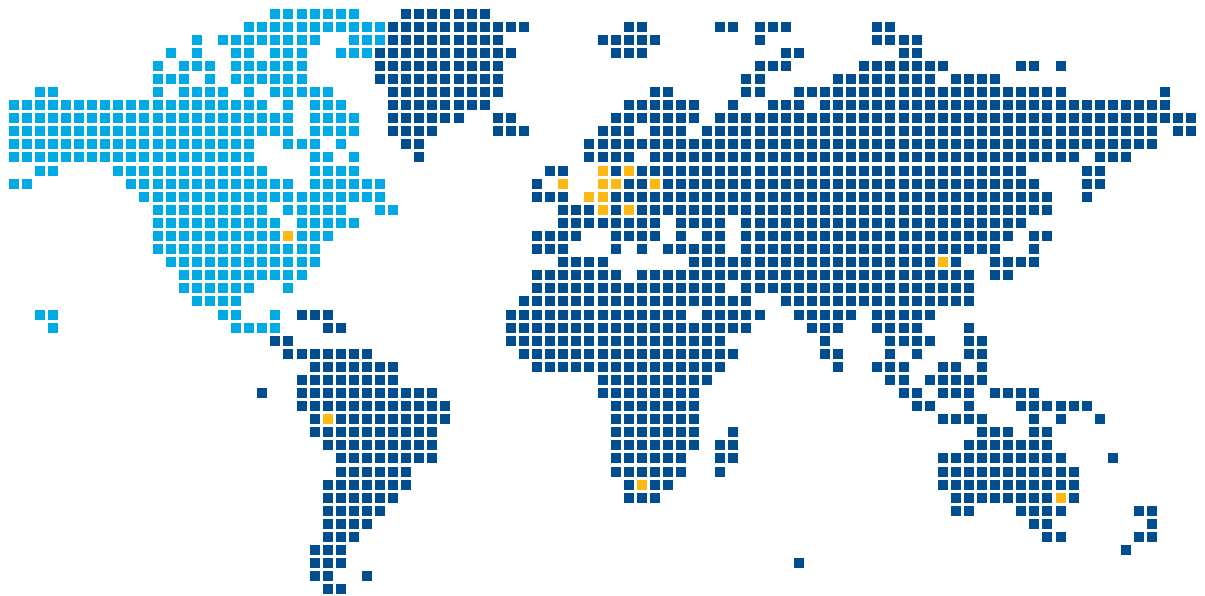
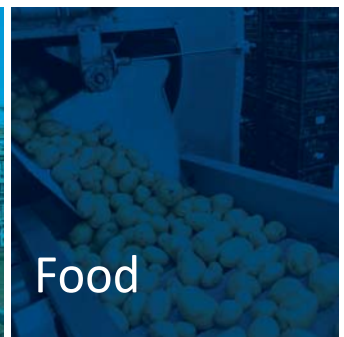
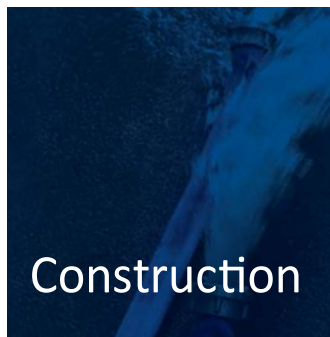
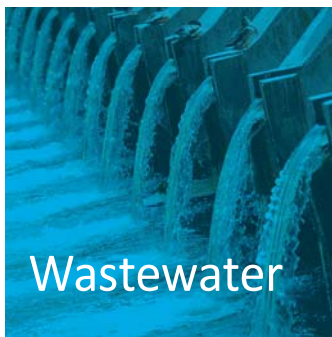
Available with the following suction X intake sizes

- 100 X 150 mm (4" X 6")
- 150 X 200 mm (6" X 8")
- 200 X 250 mm (8" X 10")
- 250 X 300 mm (10" X 12")
- 300 X 400 mm (12" X 16")
- 400 X 500 mm (16" X 20")
- 500 X 700 mm (20" X 28")
- 700 X 1000 mm (28" X 40")

Hidrostal Pumps

Due to their outstanding characteristics, Hidrostal pumps are used in numerous municipal and industrial sectors all around the world. Our pumps are custom-made and are specially tailored to the needs of each location. Our specialists select the suitable material combinations and individually adapt every pump to the local conditions. We ensure with this process that Hidrostal pumps are successful in difficult applications and achieve the best results with respect to performance, energy efficiency and low life-cycle costs.

- clog-free pumping
- high suction capacity
- gentle delivery due to low shear forces
- high efficiency
- stable, steep pump curve
- long service life
- low pulsation
- continuous flow proportional to the speed
- high pressure stability across a wide speed range



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