



Pioneers In Pump Technology

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Hidrostal are the inventors of the screw centrifugal impeller and are totally dedicated to its development and improvement. For more than 30 years a continuous research and development programme has given

Hidrostal a technology advantage in handling difficult materials which has lead to a family of pumps being developed with variations of the screw centrifugal impeller to solve specific pumping problems.



Creativity in Pumping Solutions



Hidrostal's design and engineering teams have extensive knowledge and experience of pumping and are available to solve your pumping problems.

They will help you with pump selection, design and installation to ensure the maximum return on investment over the life of the Hidrostal pump.

Providing Screw Centrifugal Impeller Solutions



Solids Handling

The impeller geometry and free passage is designed to cope with solids laden liquids especially those solids that are raggy and fibrous.



Viscous Pumping

The pump combines the properties of a centrifugal pump with the advantages of a positive displace pump resulting in the pumps ability to handle higher viscosity liquors than other types of centrifugal pump.



Low Shear Pumping

The impeller provides very low shear liquor transfer and is ideally suited to handling liquids such as oily water, where emulsification is not desirable, and Biologically Active Sludges (R.A.S), where avoidance of floc damage is important.



Delicate handling

The gentle handling impeller is designed for pumping delicate produce, for example fish, fruit, vegetables and crystals/ crystalline slurries, without damage.

Reducing The Cost Of Pumping

When it comes to providing the most cost effective and appropriate pumping solution no one does it better than Hidrostal.

The screw centrifugal impeller has been designed to minimise Life Cycle Costs (LCC). And by applying its industry knowledge, technical expertise and wide range of engineering skills, Hidrostal really does understand pumping problems and is able to solve them.

Every aspect of a contract can be undertaken:

- Concept
- Design
- Manufacture
- Installation
- Commissioning
- Service

Hidrostal The No Worry Solution

Hidrostal provide support throughout the life of a project. The mechanical & electrical design, development and installation services are complemented by after sales service and support capabilities.

- On-going consultancy
- Technical support
- Maintenance & repair
- Operator & maintenance training
- Spares



Pumps for All Applications



Working in a broad range of industries



Developing pumping solutions whilst
reducing life cycle costs



Working in Water

- Network pumping stations
- Sewage treatment plants
- Sludge pumping expertise
- Emergency pumping



Working in Industry

- Aquaculture
- Brewing
- Civil Engineering
- Construction
- Food Processing
- Paper
- Petrochemical
- Oil and gas
- Sugar refining



Principal Applications are:

WASTEWATER

- Raw unscreened Sewage
- Primary Sludge
- Blended Sludge
- Digester Sludge Recirculation
- Return Activated Sludge (R.A.S)
- Surplus Activated Sludge (S.A.S)
- Tanker Loading
- Storm water
- Auto-desludging



CLEAN WATER

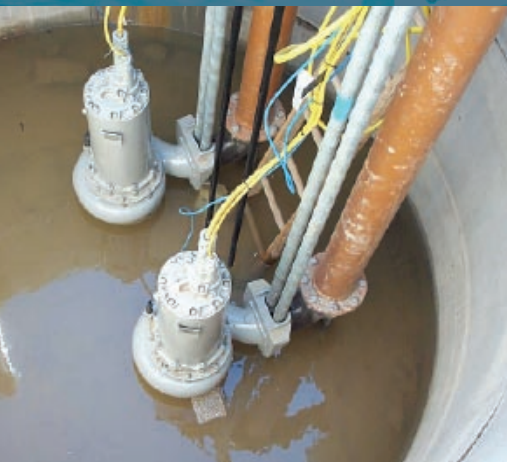
- River intake
- Clarifier Sludge
- Transfer of Granulated Activated Carbon (G.A.C)
- Bulk water transfer containing fish

Application

- Delicate crystals
- Effluent
- Live fish
- Movement of fruit & vegetables
- Oily water
- Paper stocks
- Wastewater
- Slurries
- Sump emptying



Our Pump Range



Submersible

Pumps are heavy-duty construction, designed to operate at depths of 20 metres with special versions available for greater depths.

Guide Rail Mounted

For permanent installation and ease of maintenance, a guide rail mounting arrangement available. Twin guide rails ensure the pump is guided to the discharge elbow and correctly locates in position to give a leak-free connection.

Free standing or portable units

For applications where a permanent guide rail system is inappropriate, or a temporary arrangement is required.

Air or hydraulically driven options

For applications where there is no electrical supply or it is a Zone 'O' environment, air or hydraulically driven portable or permanently installed units can be supplied.





Axial Flow Pumps

Axial flow pumps are designed for low head applications up to 10m, and flows from 30 to 1100 l/s. Based around the standard range of screw centrifugal submersible pumps, the volute on the low pressure version is replaced with a casing having an axial discharge enabling the pumps to be installed in a tube or concrete chamber.



Immersible Pumps

The immersible pumps are a versatile, innovative development of the established submersible range. Capable of continuous operation in a dry installation, the immersibles may be operated with equal efficiency when fully or partially submerged. The pumps are particularly suited for dry pit applications and installations where quiet running, clean surroundings, reliable and long trouble-free operation is required. The pumps may be installed vertically or horizontally.



Flywheels

For surge control in pipelines, submersible and immersible pumps are available with flywheels. Also available on end suction pumps.

Aerators & Storm Tank Cleaning

V02 Venturi aerators are driven by Hidrostal pumps. They are available as free standing, guide rail mounted, externally mounted on above ground tanks, portable or floating units, providing an efficient and economic solution for:

- Provision of oxygen for the biological treatment of polluted effluents
- Rejuvenation of oxygen depleted water
- Enhancement of chemical reactions
- Powerful mixing of tank or lagoon contents.



Our Pump Range

End Suction Pumps

Hidrostal offer two distinct designs, both being suitable for horizontal or vertical mounting. The direct coupled version, with a flange mounted motor, is a compact unit having convenient maintenance features. The long coupled model offers a traditional heavy duty design. Both are available with Hidrostal's wide choice of hydraulic ends and shaft sealing options.



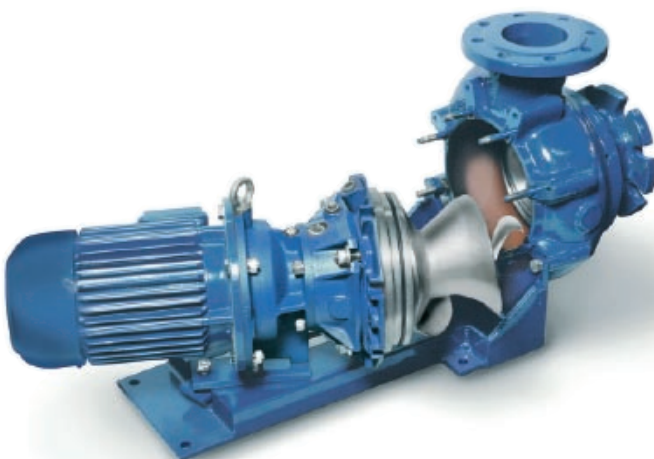
Direct Coupled

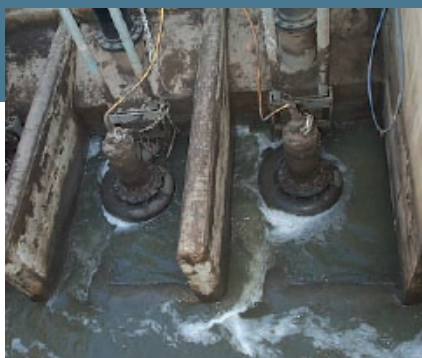
The direct flange mounted motor is spigoted onto the bearing frame and eliminates the possibility of shaft misalignment. As additional security, a flexible coupling is also employed. The units are suitable for horizontal and vertical mounting and the back pull out design means the complete rotating unit, including the motor, can be simply withdrawn for inspection and maintenance of the hydraulic end. Available for pumps having branch sizes of 50 to 500 mm.



Long Coupled

The long coupled pumps are of a traditional design, offering robust construction and long reliable service for both vertical and horizontal mounting. The bearing housing is of modular construction, permitting various arrangements of mechanical seal or soft packing to be used. The shaft end bearings have been selected to be used with belt drives and yet maintain long bearing lives.





Prerostal Flow Matching & Sump Cleaning System

The PREROSTAL SYSTEM is a unique method of adjusting pumping rate to match varying inflows using constant speed motors and the Hidrostal immersible screw centrifugal pump. In addition, it automatically cleans the sump of floating and settled solids eliminating sump maintenance and reducing odour. The Prerostal System is a proven alternative to Archimedean screw pumps and Variable Speed Drives (VSDs).



Diesel Engine Driven Self-priming Pumps (Betsy)

Betsy' is a truly versatile and universal self-priming pump package designed around the Hidrostal screw centrifugal pump, to meet the needs of emergency and project-based pumping.

- Self priming diesel driven pump set
- Pumps clean liquids, rag-laden sewage & viscous sludges
- Electronic vacuum priming system means pump runs only when needed
- Patented electronic controls
- Automatic start/stop by level control on suction or discharge side
- Low fuel consumption (up to 50% lower than conventional 'dirty' water pumps)
- Fully bunded fuel tank placed in acoustic canopy
- Low noise emissions (from 55 dB at 7 m)
- Skid or Trailer mounted
- Range from 100 m to 250 m

Due to the patented electronic controls it is possible to monitor Betsy's operation remotely. This can be achieved by interfacing a telemetry system with the control module.



Packaged Pumping Stations

A range of fully self-contained pump stations are available with single or twin Hidrostal submersible pumps, complete with pipework, valves and level controls. The pumps are installed in strong corrosion resistant chambers, suitable for burial underground and fitted with access covers. Special versions are available for mounting in dry areas such as cellars or basements.

Our Pump Range



Electric Driven Self-priming Pumps

The basic system comprises of a vacuum pump, a ball type non-return valve fitted to the pump discharge, and a Priming Chamber mounted to the suction side of the Hidrostal Pump. A connection is taken from the chamber to the electric vacuum pump. The vacuum pump operation monitors the level in the chamber. An automatic shut off valve, which isolates the vacuum pump in high water conditions, is fitted between the chamber and the vacuum pump.

The basic configuration is set to operate with the priming system controlled independently from the Hidrostal pump. The pump operation can then be controlled by site requirements, using level controls etc., if required.



Sludge Tank & Digester Mixing

Unlike other mixing systems, the Hidrostal concept does not require any pipework or structural steelwork within the tank. With the pump inlet and outlet pipes mounted on the walls, there are no obstructions to collect rags or encourage the settlement of sand and grit on the floor. As a result of these features, cleaning requirements are minimised.

Every Hidrostal mixing installation is a bespoke design that takes into account the sludge characteristics and the geometry of the tank. Proposals can be based on CFD [Computational Fluid Dynamics] analyses to ensure that the pump and nozzle locations are optimised. For large tanks, we can offer multi pump systems, where there is the opportunity to have the nozzles at differing heights and discharge angles.



Fish & Food Pumps

Originally developed for pumping fresh fish directly from the boat to the processing plant, the Hidrostal screw centrifugal impeller has proved to be ideal for a wide range of other food applications including fruit, vegetable, fish, meat, poultry, brewing and sugar refining industries.

The impeller consists of a single spiral vane, which extends axially into the suction of the pump. Gentle handling of bulk and shear sensitive materials is guaranteed by the vane's long radius curves and very low angles which give gradual pressure generation and slow change from axial to radial direction.



Services

Hidrostal's comprehensive product range is strengthened by the experienced and fully skilled staff employed who are committed to maximising the life and performance

of the Hidrostal pump. The staff's expertise in the design, manufacture and installation phase of projects produces practical engineering with proven, workable and affordable designs.



Design

The in-house capability will design and engineer a total package from initial concept through detail drawings to completion.

- Analysis and resolve pump problems
- Select the right pump for optimum efficiency
- Design solution to suit application
- Modify pump solution to fit with installation requirements



Contracting

Hidrostal provide a total installation and commissioning service. Whether it is for a new project or re-furbishment of existing plant, Hidrostal's engineers will work with you to ensure your pumping solution is implemented with as little disruption to on-going operations as possible. This can be as the Project Manager, in charge of the total installation, or working as part of your team as subcontractors.



Maintenance & Repair

Hidrostal's Workshops at Newbury and Leeds, along with key distributors, are able to provide on-site maintenance and service to all Hidrostal products.



All pumping solutions are tailored to meet your specific needs

For further information:



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Hidrostal Limited is a British subsidiary of Hidrostal AG, a major Swiss pump manufacturer that has a substantial production and distribution network world wide, via subsidiary companies or exclusive distributors.

Hidrostal's clients worldwide include:

Eden project
Aramco – Saudi Arabia
American University – UAE
Castlepoint – UK
Heathrow – UK
Pfizer – UK
British Waterways – UK
KP Foods – UK
Exxon – UK
Mobil North Sea – UK
Rhone Poulenc – France
Sumitomo - Japan
Nestlé – UK
Union Carbide - United States
ICI – UK
Bird's Eye Walls – UK
Bovril – UK
Guinness – UK
Kellogg – UK
Wemco – UK, United States & Australia
Johnson Matthey – UK
Warwick International – UK
Konserven Fabric – Switzerland
Alfa-Laval – India
British Nuclear Fuels Ltd
Mitsui Metal – Japan
Kimberly-Clark – UK
Texaco, North Sea
Conoco – UK



Municipal Wastewater

In the United Kingdom Hidrostal serve all the ten Water companies that deal with water supply and waste water and operate exclusive supplier/framework agreements.

Thames Water
Dwr Cymru Welsh Water
Severn Trent Water
Yorkshire Water
South West Water
United Utilities
Anglian Water
Northumbreland
Wessex Water
Southern Water
Scottish Water
Water Services in Northern Ireland
Sewage Projects Committee Abu Dhabi