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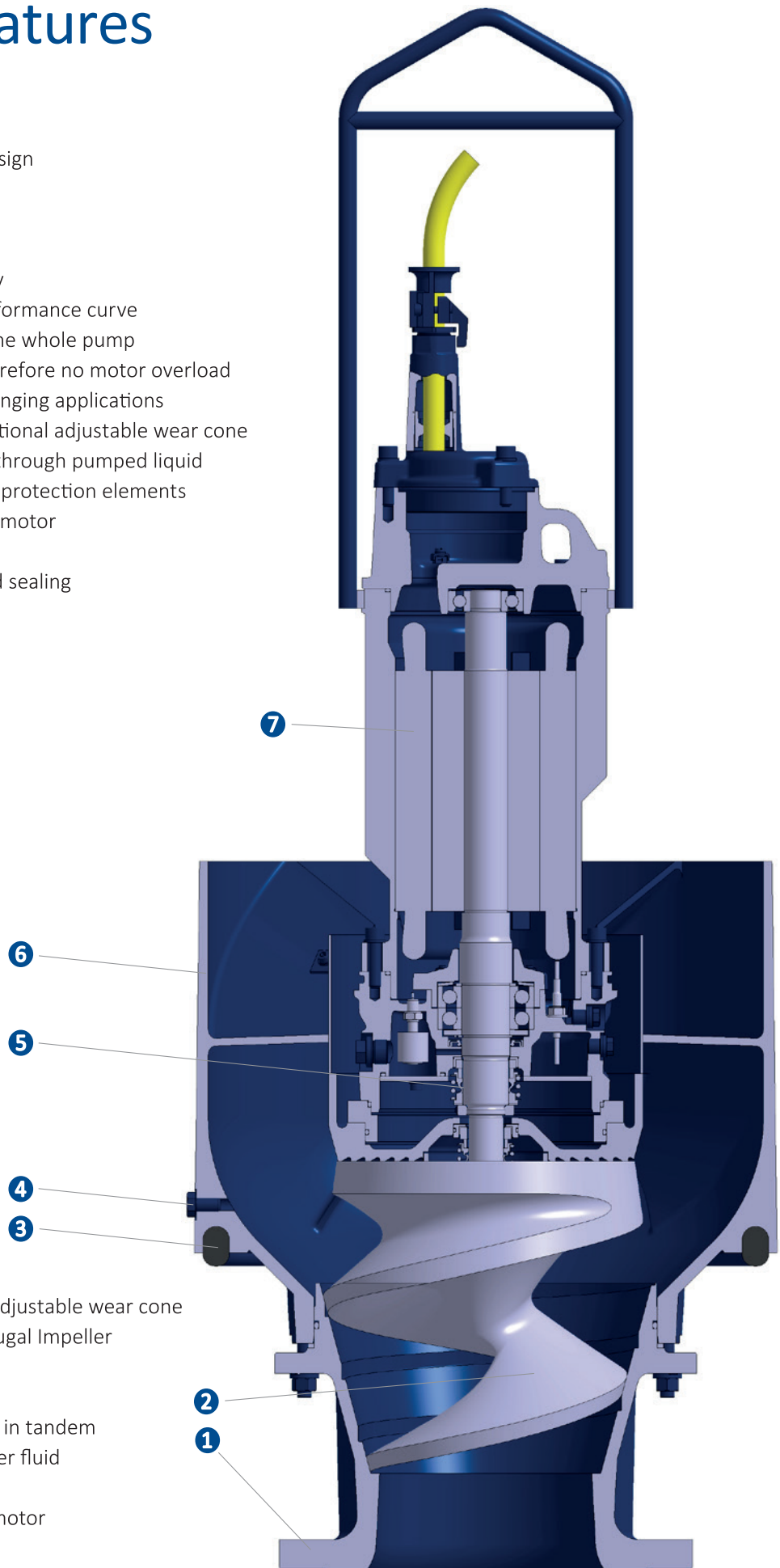
Axial Column Pump

Hidrostal's screw centrifugal impeller is ideal for pumps with axial flow direction. Axial Column Pumps were developed for the transport of large quantities of water at low delivery heads. The product range includes a large number of pump sizes.



Product features

- Compact, integrated design
- Minimal noise emission
- Large free ball passage
- Low-clogging hydraulic
- High hydraulic efficiency
- Steep, stable pump performance curve
- Flat power curve over the whole pump performance range, therefore no motor overload
- Robust design for challenging applications
- Interchangeable and optional adjustable wear cone
- Efficient motor cooling through pumped liquid
- Various monitoring and protection elements
- Hidrostal - Submersible motor
- Low space requirement
- Simple construction and sealing of the tube chamber
- Low installation costs



- 1 Fixed suction cover or adjustable wear cone
- 2 Hidrostal Screw Centrifugal Impeller
- 3 Sealing ring
- 4 Anti-rotation device
- 5 Double mechanical seal in tandem arrangement with barrier fluid
- 6 Pipe casing
- 7 Hidrostal Submersible motor

Simple installation

The Axial Column Pump is characterised by simple installation in the vertical tube chamber. After lowering into the tube chamber, the pump rests on the horizontal contact surface. The elastomer sealing ring supplied with the pump, reinforced by the mass of the pump, provides the sealing to

the pump sump. The pump's own mass ensures its position and fixed seat on the counter flange of the tube chamber. In addition, Axial Column Pumps are equipped with a simple but reliable mechanical anti-rotation device.

Hydraulic - Specifications

- Tube chamber diameter: From 400 mm (16 Inch) to 1500 mm (60 Inch)
- Flow rate: 6 to 1500 l/s
- Discharge head: up to 20 m
- Materials of construction: Cast iron, ductile iron, Hidrohard, stainless steel, Duplex



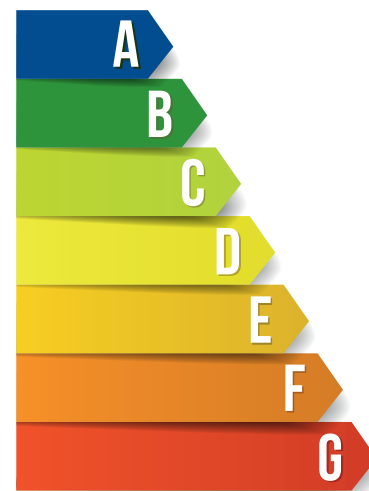
Wide range of applications

Axial Column Pumps are ideal for pumping tasks where high flow rates with low discharge heads are required. Typical applications are:

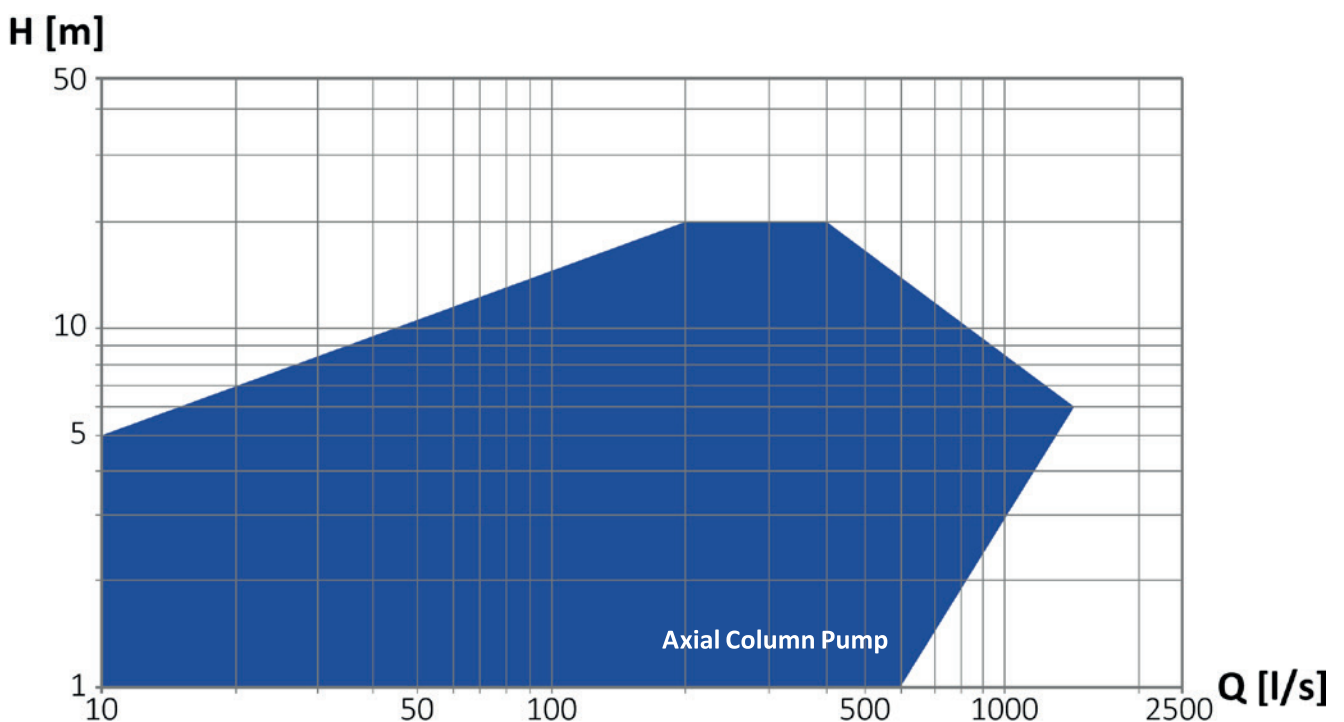
- Pumping stations for rainwater and floods
- Watering and drainage systems
- Gentle handling of return activated sludge
- Emulsion-reducing pumping of oily water
- Coastal and flood protection
- Water regulation
- Fishfriendly removal of rainwater and flooding

High efficiency

The Hidrostal Axial Flow Pump is known for its high hydraulic efficiency, up to over 82 %, and has, in combination with the Hidrostal submersible motor, a correspondingly low energy consumption.



Performance range



Range chart for the entire product group Axial Column Pumps.
Pumps with higher flow rates up to 10'000 l/s are available from Bedford Pumps.

Motor specifications

A large number of associated Hidrostal submersible motors are available for Axial Column Pumps, optionally also for applications in potentially explosive atmospheres.

The built-in circuit breakers for monitoring the motor winding temperature guarantee reliable protection against motor overload. On request, the submersible motors can be equipped with further monitoring elements: Conductivity probe and float switch for leakage control of the mechanical seals, sensors for checking the bearing tempera-

ture for both bearing locations and devices for extended monitoring of the pump operating and bearing condition. Various options are also available for the design of the electrical cables. Optionally, the motors can be equipped with screened cables to prevent unwanted electromagnetic radiation (EMV).

Motor specifications

- Shaft power: 1.5 to 250 kW
- Shaft speed: 375 to 1500 rpm
- Frequency: 50 Hz, 60 Hz, Frequency converter
- Materials of construction: Cast iron, stainless steel, Duplex



Fish friendly pumps

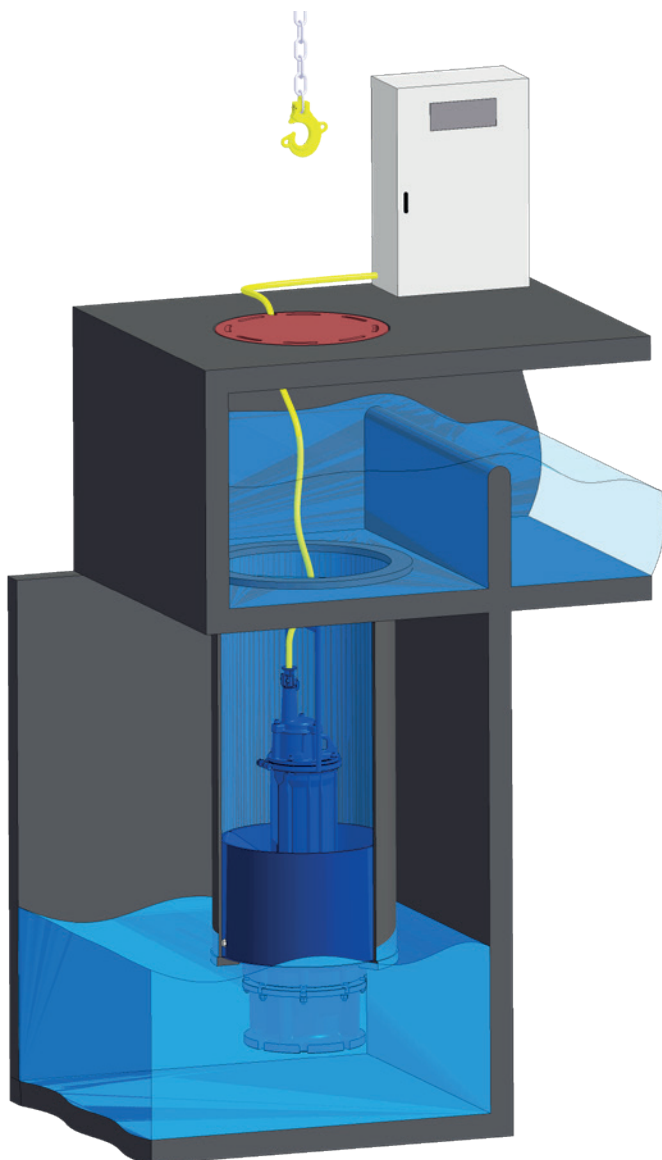
Hidrostal Axial Column Pumps are particularly characterised by their fish-friendly behaviour. With the large free ball passage at relatively low motor speed, the pump is perfectly suited for use in fish passages where the transport of live

fish must be guaranteed with minimal damage. The ability for fish friendly pumping has also been tested and confirmed by appropriate testing laboratories.

Use of high grade construction materials

The standard version of Axial Column Pumps is cast iron. For applications with abrasive media, Hidrostal offers pumps with wearing parts in various material combinations with increased wear resistance. Our specialists can assist to select the appropriate combination and adapt each pump

individually to the existing conditions. With this procedure we ensure that Hidrostal pumps also prove themselves in difficult applications and thus achieve the best results in terms of hydraulic and overall energy efficiency and low life cycle costs.



Installation example pump chamber

The simple separation of tube chamber and pump sump with easily detachable and captive sealing are characteristic for Hidrostal Axial Column Pumps. The compact arrangement in the underfloor construction saves building costs; above-ground installation is only recommended for the control unit. For maintenance work the pump can be lifted with a permanently installed or mobile crane.

Bedford Axial Flow Pumps

Bedford is a member of the Hidrostal Group and completes the Hidrostal range of Axial Column Pumps with screw centrifugal impellers by large capacity pumps with other impeller types. This allows flow rates of up to 10000 l/s to be achieved. Special motor voltages up to 6000 V but also construction materials such as bronze are available. Contact your Hidrostal partner for further information.

Hidrostal Pump Applications

Due to their outstanding characteristics, Hidrostal pumps are used in numerous municipal and industrial sectors. They pump the most diverse fluids and materials gently and with low pulsation. 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

Wastewater

Wastewater collection
Wastewater & sewage-sludge treatment
Industrial wastewater
Manure
Ship wastewater

Industry

Paper
Cellulose & Chips
Biomass
Oil and gas
Adhesives
Paint
Plastic granulates
Solvents
Swarf and cooling lubricants
Brine

Dewatering & drainage
Bentonite
Sewer rerouting
Mine drainage
Water intake & power
Flood protection

Construction

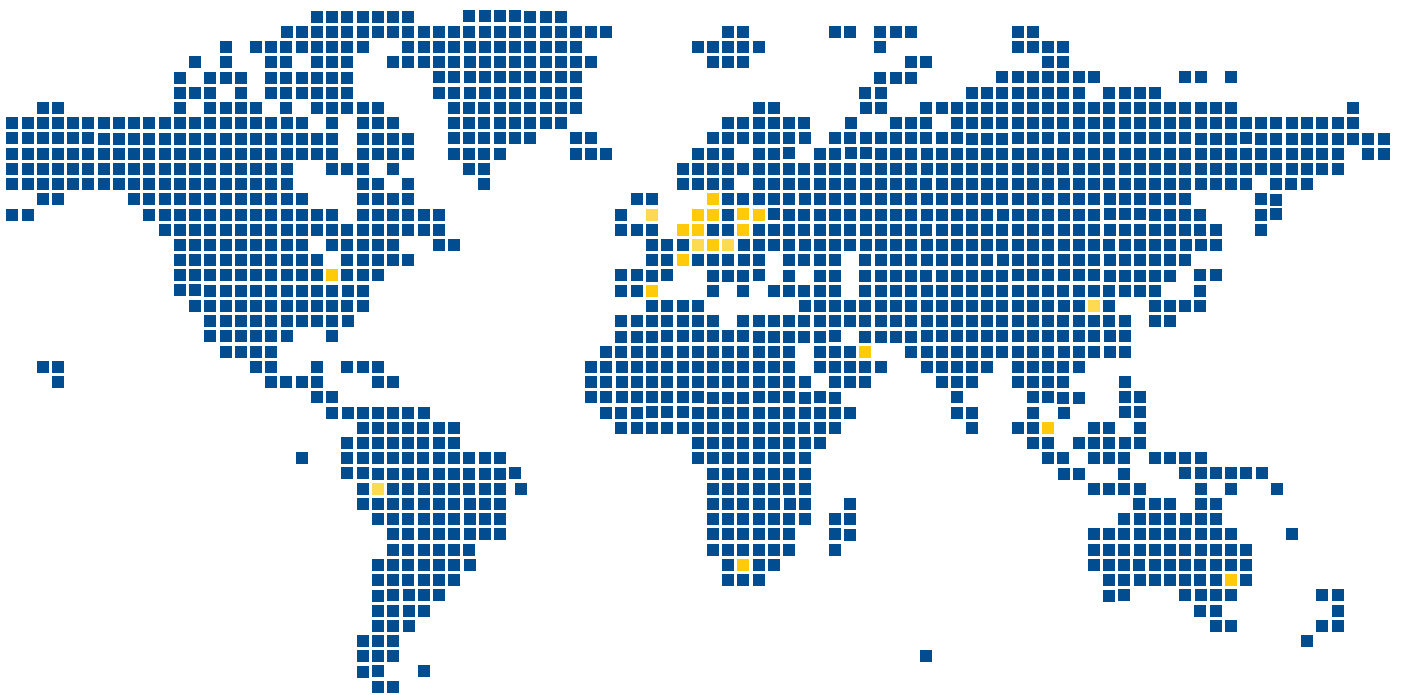
Fruits
Vegetables
Live fish
Brewery
Molasses
Oils and pastes
Gels

Food

Hidrostal worldwide.

Pumps from Hidrostal are used all around the world. Our pumps are custom -made and are specially tailored to the needs of each location. With this procedure we achieve a high level of operational effectiveness and excellent energy efficiency. It is always worth investing in a Hidrostal pump

in the long run because our pumps are low-maintenance, they almost never clog, and their long service life is unique. Depending on the location, our clients are assisted by one of our subsidiary companies or sales partners. You will find your contact at www.hidrostal.com



Make a quick and accurate pump selection:
www.hidrostal.com/pumpselector.php

info@hidrostal.com
www.hidrostal.com

