

FPX



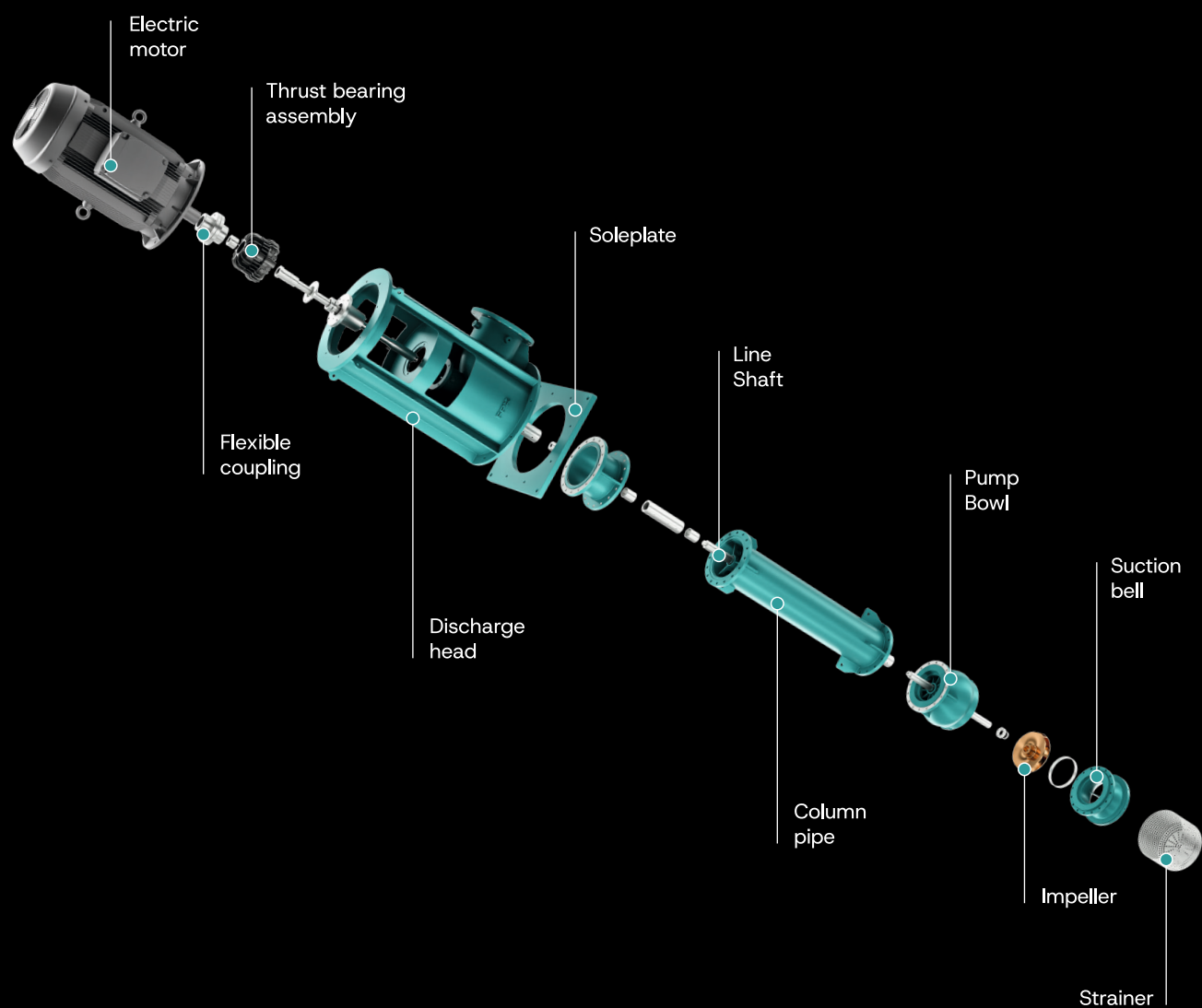
FVT

Vertical Turbine Pumps

DESIGN & FEATURES

FVT is diffuser-type vertical turbine pump in single or multiple stage configuration. FVT pumps are installed in wet-pit, dry pit or deep well applications where submergence is adequate.

FPX offers one of the most comprehensive lines of mixed flow, radial flow and axial flow vertical turbine pumps. Its wide hydraulic range is well complemented by its Engineering Flexibility.



OPERATING RANGE

FLOW	Upto 70,000 m ³ / hr
HEAD	Up to 300 meters
SIZE	100 mm to 2800 mm
TEMPERATURE	(-) 39 to 120 °C (specialized applications are possible)

Discharge Head

Robust construction of Discharge Head, designed for stability, low vibration and smooth water passage is offered with a variety of flange drilling options like BSEN, ANSI, AWWA.

Column Pipe

Flanged type column pipes are our standard design for medium and large size FVT series. Alternate design of threaded column pipes is available for smaller sizes and deep well applications. Threaded column pipes help in minimising well pump casing diameter.

Line Shaft bearings

Held securely in Spiders and Spaced adequately to provide stable support. Line shaft bearings are available in a variety of materials like Rubber, Thordon and Composite Materials, depending on the type of fluid handled.

Bearing Lubrication

Standard construction:

Includes open line shaft, where the clean water lubricates the bearings.

External line shaft Lubrication:

Isolates the lineshaft and bearings from the pumped liquid, minimizing maintenance in abrasive and aggressive liquids. Alternative lubricants such as oil or grease can also be used with enclosed lineshaft construction.

Sand Collar

Prevents grit, sand, silt from entering into the bottom bearings provided in the suction bell mouth.

Suction Bell Mouth

Provides linear and efficient flow of liquid into the eye of the first stage impeller.



Vertical Solid Shaft Motors

Pumps with thrust bearing, motor stool and non spacer coupling between head shaft and motor is a standard design. Hollow shaft motor option is possible, which allows the pump headshaft to extend through the motor and provides impeller clearance adjustment with an adjusting nut located at the top of the motor. Thrust bearing is included in the Motor.

Thrust Bearing

Supports the complete Rotor assembly vertically. Thrust bearings are designed to carry hydraulic axial load and weight of the rotor assembly. Type of thrust bearings can be Antifriction type and Tilting pad type depending upon the size and load. Thrust bearing assembly consist of Thrust bearing, bearing housin and Cooling Coil assembly. Options of oil and grease lubrication are available depending up on the sizes. Cooling to the Thrust bearing assembly can either be air or water cooled.

Separate Sole Plate

Allows grouting and levelling of the discharge head without permanently anchoring it. The pump can be removed for maintenance without disturbing the foundation.

Impeller

Radial , Semi Open type, Mixed flow and Axial design impellers are offered depending on requirements.

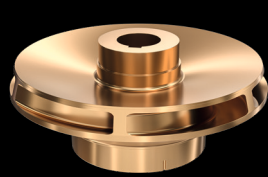
Suction Strainer

Avoids entry of Foreign material which may choke the fluid passage in the Impeller and further damage the line shaft bearings.

ENGINEERED FLEXIBILITY

Every FVT vertical turbine pump is designed around your flow, head, liquid and site conditions.
We help you choose a pump that gives reliable performance and good value over its working life.

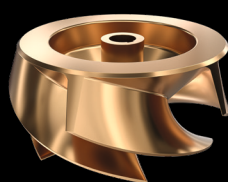
TYPE OF IMPELLERS



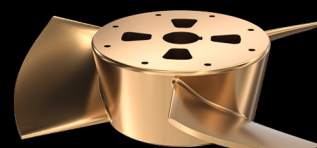
Radial Flow Impeller



Mixed Flow Impeller



Semi-Open Type Impeller



Axial Flow Impeller (Propeller Design)



Hydraulic design

Impeller type, number of stages and duty point selected for the required flow and head.



Mechanical design

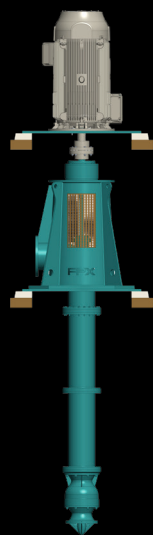
Head, column, shaft, bearings and sealing selected to suit the installation.



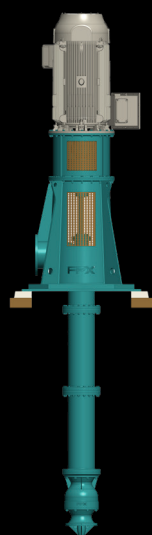
Drive options

Electric motor, engine or turbine drives to match the power available on site.

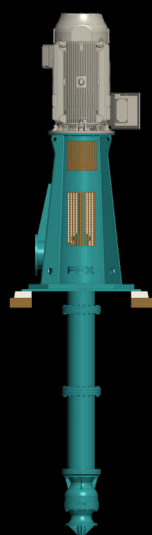
DISCHARGE HEAD ASSEMBLY



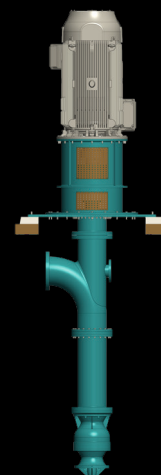
Double deck installation



Above floor installation (stool type)



Reinforced above floor installation (lantern type)



Below floor installation

BUILT FOR DEMANDING WATER & INDUSTRIAL SERVICES.

FVT pumps move large volumes of water in many different applications. They are designed for reliable service where uptime is important.



APPLICATIONS



Irrigation

Water supply for farms, canals and agricultural systems.



Water Supply

Water intake, transfer and distribution for cities and industry.



Power Generation

Cooling water, water intake and plant water services.



General Industrial

Process water and utility water for industrial plants.



Mining

Dewatering, raw water and water supply for mine sites.



Stormwater

Drainage and flood-control systems for heavy rain events.



Oil & Gas

Water handling for upstream and downstream operations.



Desalination

Seawater intake and transfer with materials suited to corrosive water.

MATERIALS OF CONSTRUCTION

MAJOR COMPONENT	RIVER / MUNICIPAL / WASTEWATER	INDUSTRIAL WASTEWATER	SEAWATER / INDUSTRIAL WASTEWATER	SEAWATER
PUMP BOWL	0.6025 / 1.0619	1.0619 / 1.4408	1.4470	1.4469
BELL MOUTH	0.6025 / 1.0619	1.0619 / 1.4408	1.4470	1.4469
IMPELLER	0.6025 / 1.0619	1.0619 / 1.4408	1.4470	1.4469
PUMP SHAFT	1.4006 / 1.4021	1.4006 / 1.4021	1.4462	1.4410
SHAFT SLEEVE	1.4006 / 1.4021	1.4006 / 1.4021	1.4462	1.4410
COLUMN PIPE	1.0038	1.0038 / 1.4404	1.4462	1.4410
DISCHARGE HOUSING	1.0038	1.0038	1.0038	1.0038 / 1.4404
DISCHARGE ELBOW	1.0038	1.0038 / 1.4404	1.4462	1.4410
LINE-SHAFT BEARING	CUTLESS RUBBER / SBR	SBR / EPDM MARINE RUBBER	COMPOSITE: THORDON, GREENE TWEED	COMPOSITE: THORDON, GREENE TWEED



RETROFIT SERVICES

Guaranteed fitment, Enhanced Efficiency & Optimum Performance

FPX offers retrofit and modernization of large engineered pumps for various applications. We deliver performance upgrades, re-rates, efficiency improvements backed by CFD-based design optimization. With track record of numerous one-to-one retrofit of critical pumps and fluid systems in the European markets, we provide solutions that extend product life, boost reliability, maximize value and lifetime availability of spare parts & services.

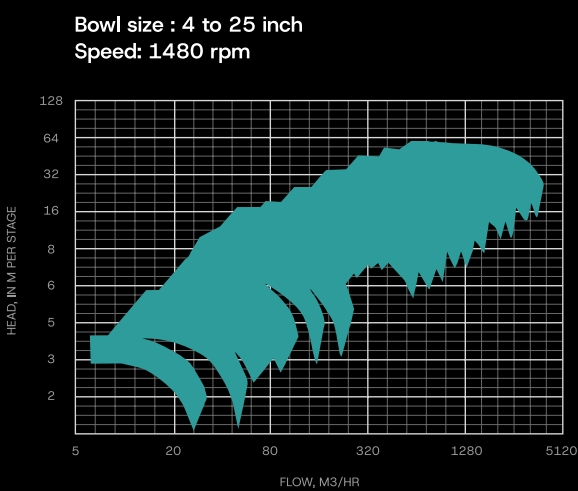
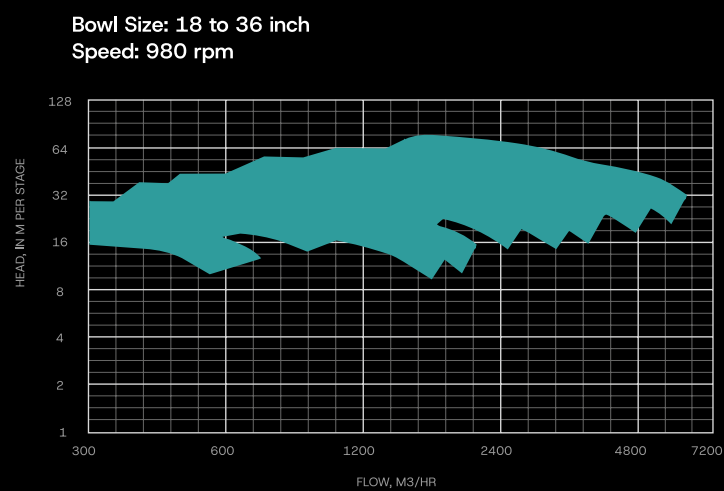
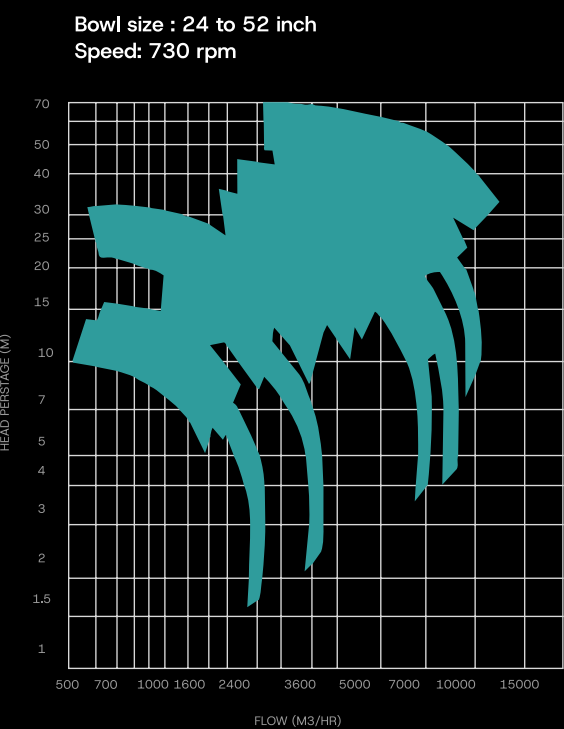
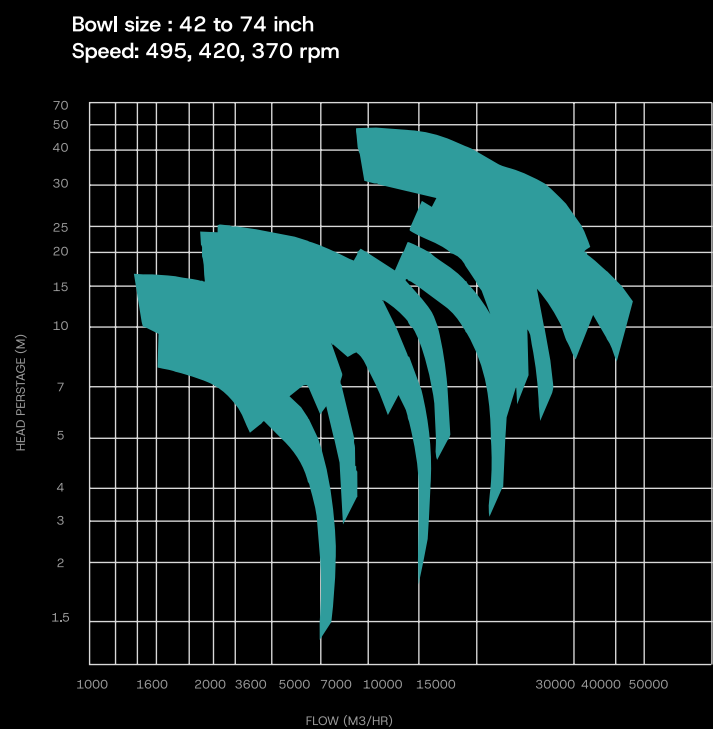
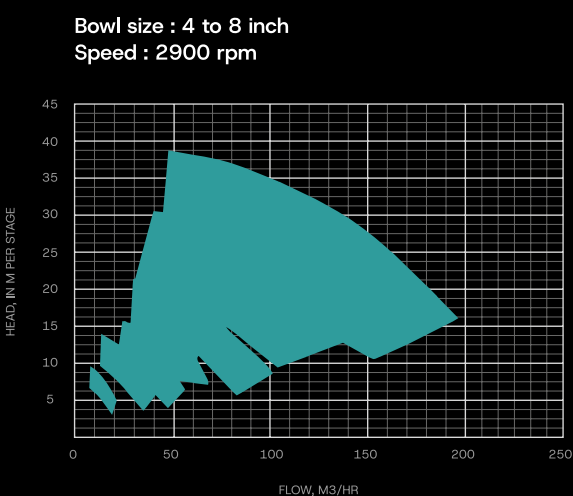
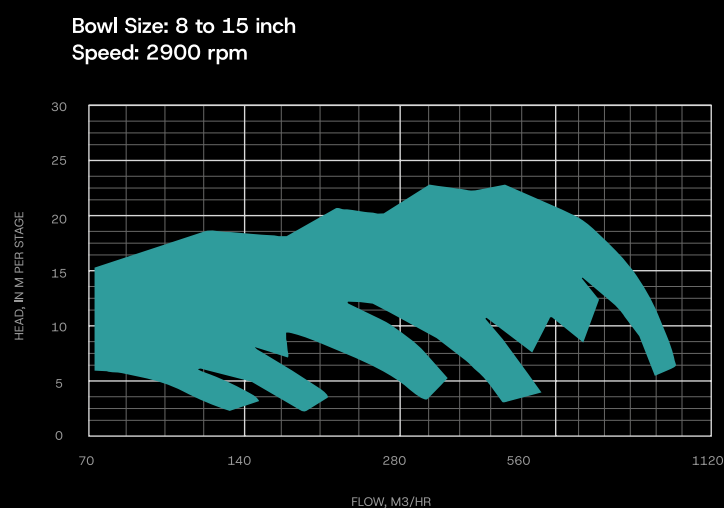


Key Features of Retrofitting

- » Precise adjustments to Current products, Discontinued product lines.
- » Brand agnostic
- » Advanced and Suitable materials for enhanced life
- » Possible Protective coatings to ensure the durability of pump components under tough operating conditions as well as economical optimization.
- » Mechanical enhancements that is designed to improve performance, reduce vibrations and noise.
- » CFD techniques to test the pump under various simulated conditions.
- » Technical support throughout the installation and commissioning process to ensure a smooth transition.



PUMP PERFORMANCE RANGE



Note: For higher capacity of pumps, please contact us





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FPX Solutions B.V. reserves the right to revise or update information without prior notice.