



PXFLOW SUBMERSIBLE SEWAGE PUMP

Quality Which Reduces Pumping Costs

For over 50 years, PAPANTONATOS S.A. has focused on the customer's design, manufacturing and service needs in the field of submersible pumps.

Our engineering department has acquired invaluable technical knowledge throughout our long and close collaboration, as a customer and a supplier, with some of the leading global pump manufacturing companies. This extensive technical experience has significantly contributed to our success as a pump manufacturer. We are currently offering some of the most robust and energy efficient pump units in the market that are perfectly adapted to all sorts of difficult operating conditions in clean water and wastewater pumping applications.

We are working according to the ISO 9001:2000 norms certificate from TUV since May 2000. Our well organized company owned facilities utilize contemporary CNC (Computer Numerical Controlled) lathes and milling equipment for the machining of our motor cast parts and pump components that are produced in our foundry.

Our design department utilizes some of the most advanced 3D-CAD (Computer Aided Design) programs in order to materialize with great accuracy the most efficient pump designs.

We have carefully chosen to equip our pumps with motors and standard parts made by some of the leading motor manufactures in the European Union such as Pleuger, Siemens and Franklin that are in full accordance with the latest manufacturing and environmental standards. Finally all of our pumps from both family lines, (PXFLOW and FLOWPAP), are meticulously tested in our modern test stand where crucial technical data is collected and recorded before the pumps are released for dispatch to the customer.

Motor Units

Pumps are equipped with **Siemens** motor parts standard IE1 or IE2, premium efficiency **IE3 & IE4** as optional for selected pump model, are fitted with F class insulation. Optional for operating temperatures up to 155 degrees Celsius, or can be fitted with class H insulation. Three thermal overload switches, one per phase, are inside the winding, to combat high temperature loads.

Motor shaft in stainless steel, **AISI 431**, as standard. Superior than AISI 420.

Cartridge Sealing System "FAST SEAL"

The shaft system consists of a double set of mechanical seals that are built into a replaceable cartridge. The cartridge sealing system can be easily removed on site without the need of any special tools and thus eliminating the risk of any improper

installation. The primary seal (impeller side) is made of carbide abrasive resistant against silicon carbide. The secondary seal (motor side) is made of heat resistant carbon against silicon carbide (option for PX1&2). Both mechanical seals incorporate a stainless steel shaft sleeve (AISI as option) protecting 316 the pump shaft.



Clearance Reduction System "Reducer'

The channel impellers are fitted with volute/ impeller clearance reduction wear rings. This system easily allows the ring to be repositioned axially in order to reduce the clearance between the channel impeller and the volute. This sealing method advantages over other methods which use radial impeller and volute wear rings that cannot be repositioned and have to be replaced when wear levels are not acceptable.



8370 GPM 441 1322 2203 3084 3965 4846 5727 6608 7489 m 50Hz 100 328 262 80 197 60 Head 40 131 Ptx,250 66 20 Ptr:300 0 0 1500 300 500 700 1100 1300 1700 1900 100 900 l/s Г 0 400 100 200 500 Capacity 300

Performance Curves H_[m]

DN50 - DN300
0.65kW - 115 kW
2 - 8 poles

Internal Motor Cooling Jacket With ECOFLU Cooling Jacket

All **PXFLOW** standard motor sizes are equipped with or without closed cooling system. An internal impeller that is fitted in between the two mechanical shaft seals circulates the cooling liquid (ECOFLU) in a closed loop inside a cooling jacket. The heat is then transferred to the pumped liquid by means of a cooling flange (heat exchange).

Pump Volutes - Fast Lock The PXFLOW volutes are made from high quality cast iron and have been designed to have additional thickness on the walls. Extra attention has been given to the inside smoothed volute surfaces so higher hydraulic efficiency and minimum turbulence can be achieved. The volute is connected with the motor unit through a fast lock connection system by means of stainless steel latch bolts for easy and fast removal. The motor unit can be quickly removed from the pump's volute for an easy inspection.



Impellers

PXFLOW impellers are made from hard wearing ductile iron, GGG40 as standard, (Optional for stainless steel in AISI 316 or DUPLEX), and come in three types (single channel, multi channel and vortex) with a non clogging design that meets the pumping liquid needs and duty. The initial impeller design can be easily adjusted, (when trimmed), to meet the customer's performance requirements. PXFLOW impellers are dynamically balanced and machined to exacting tolerances reduce unwanted to any vibrations.







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