

Intelligent pump market is projected to reach \$2.1 billion by 2031, growing at a CAGR of 7.3% from 2022 to 2031

Intelligent Pump Market by Type (Centrifugal, Positive Displacement), by Component (Pumps, Control Systems), End User Industry (Industrial, Building Solutions)

PORTLAND, UNITED STATES, March 24, 2023 /EINPresswire.com/ -- In today's world, technology is rapidly advancing, and so is the equipment used in various industries. The pump is an essential tool in many industries, and with the introduction of intelligent pumps, the game has changed entirely. In this blog, we will explore what an intelligent pump is, how it works, and its benefits.



global intelligent pump market size was valued at \$1 billion in 2021, and is projected to reach \$2.1 billion by 2031, growing at a CAGR of 7.3% from 2022 to 2031.

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What is an Intelligent Pump?

An intelligent pump, also known as a smart pump, is a device that uses advanced technology to regulate and control the flow rate and pressure of the liquid being pumped. It is designed to perform optimally by monitoring the operation of the pump and making adjustments in real-time. An intelligent pump can detect changes in the system and respond accordingly to maintain the desired flow rate and pressure.

rise in population and rising disposable income of people in general, are fostering the growth of manufacturing industries. In addition, despite the negative impact of COVID-19, the food and

beverage, petrochemical, and other similar industries performed well, and is expected to drive the demand for intelligent pumps as they are extensively used in these industries for fluid movement. Moreover, rising population is also driving demand for electricity, which fuels the power generation and oil and gas sectors. Furthermore, owing to the increased awareness regarding sustainability, masses globally are adopting relatively eco-friendly ways of living.

How Does an Intelligent Pump Work?

An intelligent pump works by using sensors to monitor the flow rate, pressure, and temperature of the liquid being pumped. It uses this information to adjust the pump's speed and power to maintain a constant flow rate and pressure. The pump is also equipped with a control panel that displays real-time data and allows for manual adjustments to be made.

Intelligent pumps can be programmed to operate in various modes, such as constant pressure, constant flow, and variable speed. These modes can be switched between depending on the specific requirements of the application.

Benefits of Using Intelligent Pumps

Energy Efficiency: One of the significant benefits of using an intelligent pump is its energy efficiency. By adjusting the pump's speed and power based on the current demand, an intelligent pump can reduce energy consumption, leading to lower energy costs.

Reduced Maintenance Costs: Intelligent pumps are designed to monitor their own performance, and they can detect any faults or issues in the system. This can help to identify problems before they cause damage or a breakdown, reducing the need for costly repairs.

Improved System Reliability: Intelligent pumps can maintain a constant flow rate and pressure, even when there are changes in the system. This helps to improve the overall reliability of the system and prevent downtime.

Increased System Control: With an intelligent pump, you have better control over the system. The pump can be programmed to operate in various modes, and adjustments can be made in real-time to meet the specific requirements of the application.

Better Monitoring and Data Collection: Intelligent pumps are equipped with sensors that provide real-time data on the pump's performance. This data can be used to monitor the system, identify potential issues, and make adjustments to optimize performance.

Applications of Intelligent Pumps

Intelligent pumps are used in various industries, including:

Water Treatment: Intelligent pumps are used in water treatment plants to maintain a constant flow rate and pressure. They can also detect changes in the water quality and adjust the system accordingly.

Oil and Gas: Intelligent pumps are used in the oil and gas industry to regulate the flow of fluids in pipelines. They can detect changes in pressure and temperature and adjust the flow rate accordingly.

HVAC: Intelligent pumps are used in HVAC systems to maintain a constant flow rate and pressure. They can adjust the system based on changes in temperature and humidity.

Chemical Processing: Intelligent pumps are used in chemical processing to control the flow of chemicals and maintain a constant pressure. They can also detect changes in the chemical composition and adjust the system accordingly.

Competition Analysis

Key companies profiled in the intelligent pump market forecast report include ABB, All Pump Solutions, Armstrong Fluid Technology, Circor International, Inc., Flowserve Corporation, Grundfos Holding A/S, Ingersoll Rand Inc., ITT Inc., Ketek Group, Kirloskar Brothers Limited (India), KSB SE & Co. KGaA, Sulzer Ltd., Unico LLC., Wanner International Ltd. (Hydra-Cell), Wilo SE, Xylem Inc., and Yaskawa Electric Corporation

Intelligent pumps are a game-changer in the pump industry. They offer numerous benefits, including energy efficiency, reduced maintenance costs, improved system reliability, increased system control, and better monitoring and data collection. With applications in water treatment, oil and gas, HVAC, and chemical processing, intelligent pumps are becoming an essential tool in many industries. If you're looking for a way to optimize your system's performance while reducing costs, an intelligent pump might be just what you need.

1. <u>Micro motor market</u> size was \$ 36,477.9 million in 2020, and is expected to reach \$56,066.2 million by 2030, with a CAGR of 4.1% from 2021 to 2030

2. <u>Water pipeline leak detection systems market</u> size is expected to reach \$2,349.6 million in 2027, from \$1,748.6 million in 2019, growing at a CAGR of 6.8% from 2020 to 2027.

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