

# Automated Infusion Pump

An affordable infusion pump with a flow rate accuracy of 0.01ml per hour

## BACKGROUND AND CHALLENGE

The requirement was to design an automated infusion pump that was both accurate and affordable. Given the increased need for infusion pumps, it was essential to reengineer non-functional pumps and enable external communication for new-generation infusion pumps.

## SCOPE OF WORK

- Research and landscape for patent
- Develop innovation and mechanism concepts
- Reengineer the software, hardware, mechanical, and industrial components
- Test functionalities and executions in house and in lab
- Verify design and ensure pre compliance
- Develop functional workflow
- Design communication protocols
- Verify and validate implemented modules

## SOLUTION

- Used a novel and patentable mechanism to develop infusion pumps
- Integrated multiple components for seamless delivery
- Improved air and pressure sensors for greater reliability
- Extended support for product tooling
- Completed product documentation for regulatory submission



## IMPACT

- Offered affordable healthcare
- Delivered a wide coverage of drugs and customization for different volumes of drugs
- Empowered customers to make adjustments as per their geographical needs
- Improved accuracy and patient outcomes