

Infusion pump

Country of origin | United States of America

Health problem addressed

Infusion pumps are in widespread use in clinical settings such as hospitals, nursing homes, and in the home for the delivery of nutrients, medications or fluids. A rugged and portable infusion pump can be a life-saving difference for those in need of infusions especially for areas of natural disaster or low-resource settings.

Product description

Ruggedized rotary peristaltic design pushes fluid around a rotor providing positive pressure. Bag can be anywhere. All other pumps are linear peristaltic pumps, which require IV bag above the pump. Can be used in any axis, even upside down. All others break frequently and cannot take remote site abuse or extreme heat, cold or moisture.

Developer's claims of products benefits

This pump is economic, doesn't break, can be in any position, bag can be anywhere, is simple to operate and lasts a very long time. Others have had many recalls, bag must be vertically above the pump, and often need repair.

Suitability for low-resource settings

This device is economic, needs not maintenance, never breaks. Well suited for use in remote environments (for example in the North Slope oil well platforms, a doctor was able to use this technology to treat herself for cancer in Antarctica). Customers include Doctors Without Borders in Chad, and in Haiti by NYC Fire Department after the 2010 earthquake.

Operating steps

According to the results of the Homeland Security test, the pump requires little training. Simply open the rotor door, insert the tubing, rotate the rotor and close the door. At this point the pump is ready for use.

Regulatory status

The technology has had trials at Temple University (accuracy), Butterworth Hospital (accuracy & blood haemodialysis), Ohio State (accuracy), Navy Submarine Station (hyperbaric chambers, Genentech (TPA clinical trial)

Future work and challenges

This current pump is ideal and proven for emerging market countries (ruggedness, simplicity, always works). Now working to come out with a modular three channel unit, much smaller in size (2lbs), modular pump in 2015 with added wireless and a drug library

Use and maintenance

User: Can be used by the patient, physician, technician, nurse, midwife or family member

Training: Can be done by film, operating instructions or by company representative

Maintenance: Regular maintenance not required, the manufacturer, engineer or technician must do repairs.

Environment of use

Setting: Designed to work in any healthcare setting or for home use

Energy Requirements: Runs off of either batteries which require 220V for recharging, or 12-24 DC.

Software Requirements: Proprietary Software required, used to operate the pump

Product specifications

Weight (kg): 2

Dimensions: 110mm x 110mm x 180mm

Retail Price (USD): 2 500

Price of Consumables (USD): 6.50

Other Features: Works in temperature range of -10 to 120°C

Year of Commercialization: 1984

Currently sold in: US, Canada, Jordan, Syria, Egypt, Chad, Costa Rica, Brazil, Dubai

