



STERILIZATION PUMPS

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MACHINE HEALTH SOLUTIONS IN ASEPTIC MANUFACTURING



THE PROBLEM:

Pumps are the backbone of aseptic pharmaceutical manufacturing, facilitating sterilization of many plants & products. Sterilizing procedures often require pump fluid mixtures of both liquid and vapor, which can degrade pump health quickly. Maintaining pumps subject to these harsh conditions can be difficult, leading to many premature failures & poor energy efficiency.



COST OF ASSET ISSUES

\$10k-\$50k/hour
Downtime Cost

2-12 hours
Downtime per Incident

10%-40%
Energy Inefficient

INDUSTRY SAVINGS POTENTIAL

Many aseptic plants have fleets of 10+ pumps

Potential savings of:
\$100k per pump
\$1m per plant

ASSET BLIND SPOTS:

There are several inherent challenges related to monitoring pumps in aseptic plants:



Challenge #1: Vibration frequencies that indicate pending failures are often undetectable by the human ear and eye.



Challenge #2: Choosing the correct pump for your specific needs is challenging due to the number of complex variables involved.



Challenge #3: Time-based preventative maintenance protocols are labor intensive, and fail to prevent most pump issues.

A NEW APPROACH TO STERILIZATION PUMPS



Time-based preventative maintenance & route-based vibration monitoring do not adequately capture the real-time health of pumps involved in sterilization cycles.

Using continuous machine monitoring unlocks the health condition of pumps throughout every stage of a sterilization cycle. Access to real-time data & actionable information can dictate what actions need to be taken, and when. Pump & vibration experts assist with analysis to help uncover the root cause of issues, eliminating recurring problems & improving efficiency.

Wireless data transmission system:
Base Station, Vibration Sensor, Pressure Sensor



HARDWARE

- Vibration sensors assess overall health
 - Magnet, epoxy, or stud mounted
 - Near continuous monitoring
 - Wireless data transmission
- Pressure sensors assess design & efficiency
- Temperature sensors assess flow



SOFTWARE

- Automated alarming & notifications
- Dashboards provide quick overviews
- Customizable views for all users
- Repository for all asset health data



REAL-TIME DATA

- Any existing asset-monitoring can be integrated together in one place
- Pump models, manuals, characteristics, & design specifications assist with overall analysis



TRAINING

- Certified vibration experts are available for easy-to-understand reports on data
- On site visits for installation & analysis
- Online training available through KCF Academy
- Custom in-person & online training

CONTACT US!

Call **814-867-4097** or email sales@kcftech.com for information.

