



Condition Data Point Monitoring™

Predictive monitoring designed to lower your total cost of equipment ownership



Experience In Motion



Lower rotating equipment TCO with predictive monitoring

Collecting data from rotating equipment on a regular basis enhances the performance of machinery and systems, greatly extends their life span, and helps reduce costly downtime or failures. As part of the LifeCycle Advantage™ equipment management program, Flowserve offers Condition Data Point Monitoring (CDPM) - a proactive, predictive condition monitoring program that tracks machine condition over time. CDPM reveals long-term trends to detect and prevent conditions that jeopardize productivity and profitability.

CDPM monitors, analyzes and trends a variety of key indicators including:

- Vibration
- Process conditions
- Oil samples
- Temperatures
- Pressures
- Flow rates
- Equipment speed
- Other indicators

CDPM recommendations improve equipment reliability, enhance operational efficiency and reduce total cost of ownership. It does so by transforming reactive equipment management - characterized by unplanned emergency repairs - into predictable management based on scheduled, proactive maintenance.

The difference between data and information

CDPM does more than provide equipment and system data. The process transforms data into information to confirm the health and profitability of systems, enabling informed decisions about maintenance, upgrades or replacement.

The number of data points collected and the types of analyses performed depends on the equipment, the repair costs associated with failure, and the importance of the equipment to the process or plant. Collected data is then processed by trained analysts, where the data is exported into detailed report formats and incorporated into long-term trending charts. Reports are usually available within three business days. They are viewed online or exported to a Microsoft Word® document using a standard PC with Internet access - no special software or training is required. Each report identifies critical problems, recommends corrective action, tracks recommendations, and provides a summary.



A multi-dimensional look at equipment performance

FlowsERVE operates five regionalized, state of the art manufacturing facilities and a worldwide network of over 65 localized Quick Response Centers (QRCs) to provide single source solutions for improving equipment reliability.

Vibration collection and analysis

Vibration collection and analysis is a non-destructive process used to detect the most common rotating equipment problems such as:

- Unbalance
- Mechanical looseness
- Bearing defects
- Gear defects
- Blade/impeller faults
- Abnormal structural resonance
- Misalignment
- Rubbing
- Loss of lubrication
- Oil whirl
- Cavitation / recirculation irregularities

If left undetected, these problems lead to catastrophic damage, extensive repair costs, and lost production.

Critical temperature trending / trigger point monitoring

Critical temperature trending identifies and monitors the temperatures of motor and pump bearings, seal flush lines, seal flush coolers, seal reservoirs, and the overall process or equipment operation. Abnormal temperatures often signal premature equipment failure. Trigger point monitoring identifies and monitors specific conditions such as process pressures, flow rates, and equipment speeds which can impact equipment performance and longevity. Temperature and trigger point information collected through critical temperature trending and trigger point monitoring also augments the findings of vibration collection, lube oil sampling, and other LifeCycle Advantage equipment management processes, enabling better-informed decisions regarding equipment maintenance and management.

Lube oil sampling and analysis

The lube oil sampling and analysis program measures the condition of the lubricant through viscosity and total acid number, and provides insight into the health of the machine by identifying and analyzing contamination through particle count, water content, and spectroscopy. Used in conjunction with vibration monitoring and temperature trending, this program helps minimize the risk of catastrophic damage, costly repairs, and lost production. It also eliminates the time and costs associated with unnecessary oil changes, allowing the shift from “scheduled” to “as needed”.



It's all part of LifeCycle Advantage and the Flowserve commitment to reliability

LifeCycle Advantage is a unique, collaborative program designed to reduce total cost of ownership (TCO) and improve operating profitability. Comprised of five interrelated value-building modules, a LifeCycle Advantage implementation consists of metrics-based programs that optimize management and operation of rotating equipment with an emphasis on:

- Reliability
- Energy efficiency
- Safety
- Operations and maintenance
- Procurement
- Technical solutions



FSD186eng REV 1-07 Printed in USA

For more information about CDPM

and how it delivers positive bottom line results, contact a Flowserve representative or visit www.flowserve.com/lifecycleadvantage

The information and specifications presented in this product brochure are believed to be accurate, but are supplied for information purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, with respect to the product. Although Flowserve Corporation can provide general application guidelines, it cannot provide specific information for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper selection, installation, operation, and maintenance of Flowserve products. Because Flowserve Corporation is continually improving and upgrading its product design, the specifications, dimension, and information contained herein are subject to change without notice.

© 2006 Flowserve Corporation

USA and Canada

Kalamazoo, Michigan USA
Telephone: 1 269 381 2650
Telefax: 1 269 382 8726

Europe, Middle East, Africa

Roosendaal, The Netherlands
Telephone: 31 165 581400
Telefax: 31 165 552622

Asia Pacific

Singapore
Telephone: 65 6544 6800
Telefax: 65 6214 0541

Latin America

Mexico City
Telephone: 52 55 5567 7170
Telefax: 52 55 5567 4224