framatome

# UltraCheck® C System

## Challenge

Plants are seeking solutions to eliminate the time and cost associated with disassembly and visual inspection when verifying that check valves are working properly.

## Solution

**Advanced Non-Intrusive Diagnostics for Check Valves**
Framatome's UltraCheck® C non-intrusive safety-related diagnostic and monitoring system efficiently tests and analyzes check valves. This proven platform quickly determines overall operating performance for all types of check valves that transport liquids, gases or steam.

Employing innovative acoustic, magnetic and ultrasonic technologies, UltraCheck C detects numerous check valve problems, including a stuck or missing disk, backstop tapping, seat tapping, disk flutter, disk stud pin wear, hinge pin wear and seat leakage. Using acoustic technology, accelerometers detect impacts, rubs, flow cavitation, pump/motor starts and seat leakage.

This data, used in conjunction with magnetics and/or ultrasonics, non-intrusively reveals disk movement. Moreover, the system comprehensively verifies correct check valve operation and allows quick evaluation of problems.


The UltraCheck C system utilizes a laptop computer and features our innovative Hardware Interface Module (HIM).

## Customer benefits

- Completely non-intrusive
- Identify check valve problems/events
- Eliminate unnecessary and costly valve disassembly
- Lower repair costs by focusing only on valves that require maintenance
- Lightweight
- User-friendly software
- USB interface
- Cable lengths up to 200 feet

**Your performance**
is **our** everyday **commitment**

## Technical Information

**Valve Types**

- Swing
- Tilting disk
- Duo-disk
- Lift
- Nozzle

**Sensory Capabilities (8-Channel Input)**

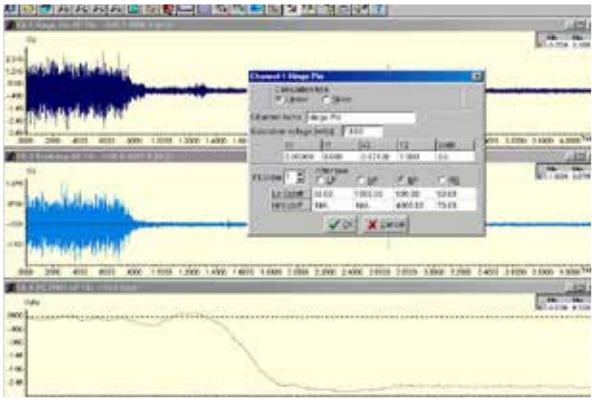
- Acoustics (4)
- Magnetics (2)
- Ultrasonics (2)

**Software**

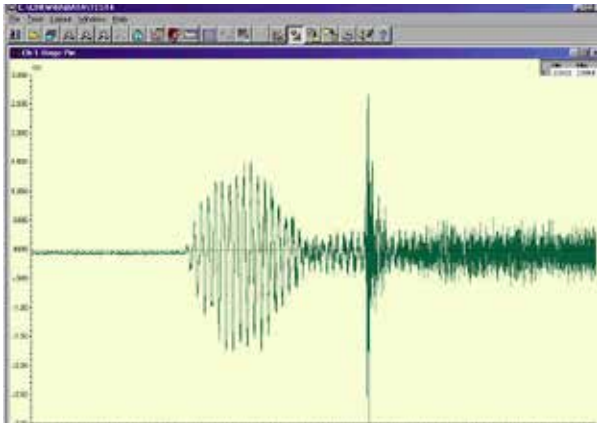
- MS Windows OS XP, 7, 10
- User-selectable sampling rates
- Sound output
- Trace overlay for trending
- Digital filtering using slider controls
- Disk opening angle/angular speed calculations
- Network compatible

**Operating Modes**

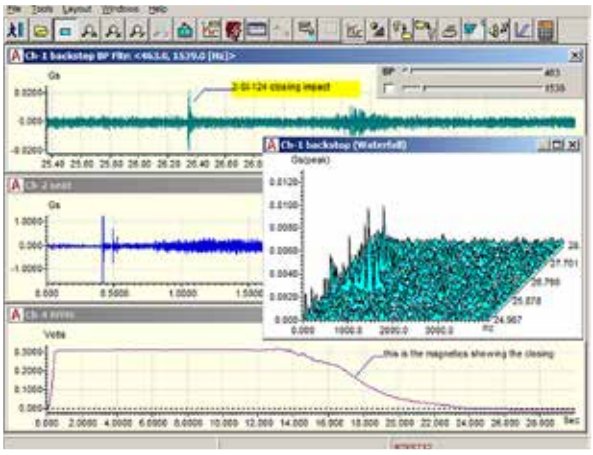
- Trigger start (user-selectable)
- Manual
- Real-time monitoring in time and frequency domains



The Universal Signal Analysis (USA) software includes such signal processing techniques as Digital Filtering (shown here) and Fast Fourier Transforms (FFT), which makes data interpretation easier.



The “waterfall” is a three-dimensional display plotting frequency versus amplitude versus time revealing opening, steady state and closing events through the test.



Zoomed views of data are among those analysis functions that aid in determining valve conditions.

Scan to view our parts on the web:
**www.framatome.com/npc**

OFF HOURS Cell Phone Coverage:
434.610.3880

**Contact:** Lew McKeague • 434.832.3506 • Cell: 434.841.4878
Lew.McKeague@framatome.com • **www.framatome.com/us**



framatome