



# AFT xStream™

Add-on Module



## Pulsation Frequency Analysis

PFA Module

*Don't wait until pulsation problems occur*

Proactively calculate and visualize acoustic resonant frequencies, especially those caused by reciprocating compressors, that could damage system equipment. Problems can arise when the frequencies that are excited by pulsation are at or near the acoustic resonant frequencies of a fluid system.

### Benefits

- Avoid system weakening or failure
- Reduce operating and maintenance costs
- Minimize disruptions in production processes

### Capabilities

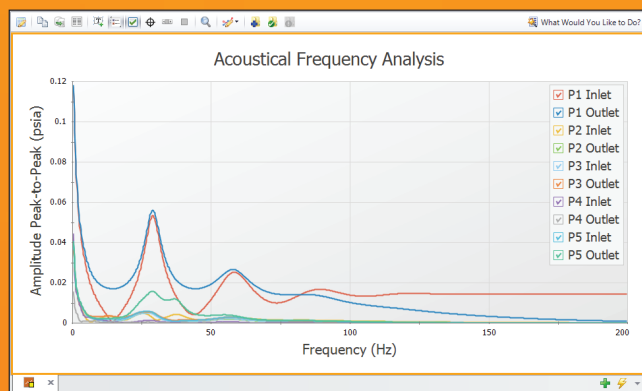
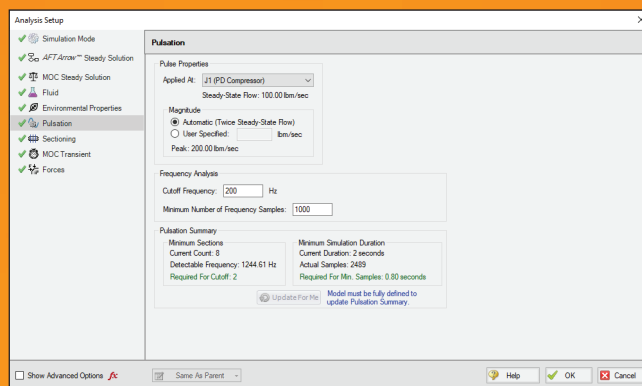
- Predict and understand resonant frequencies in systems that use reciprocating compressors so they can be avoided in operation
- Graphically show the frequency response of a system to a simulated pulse
- Work with existing AFT xStream models

## API Code 618 Design Requirements

Operating reciprocating compressors at certain speeds can match a system's unique resonant frequency. This can cause excitation, lead to vibration and ultimately result in system fatigue. Leverage a system-approach with AFT xStream PFA to avoid problematic frequencies and compressor speeds; ensuring safe operation and meeting design requirements of API 618.

PFA automates most of the pulsation analysis process using a series of steps:

1. Build the model in AFT xStream
2. Specify the characteristics of the pulse
3. Apply the forcing function to the source of the pulse
4. Run the model
5. Generate a Bode plot, displaying Frequency vs. Magnitude



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