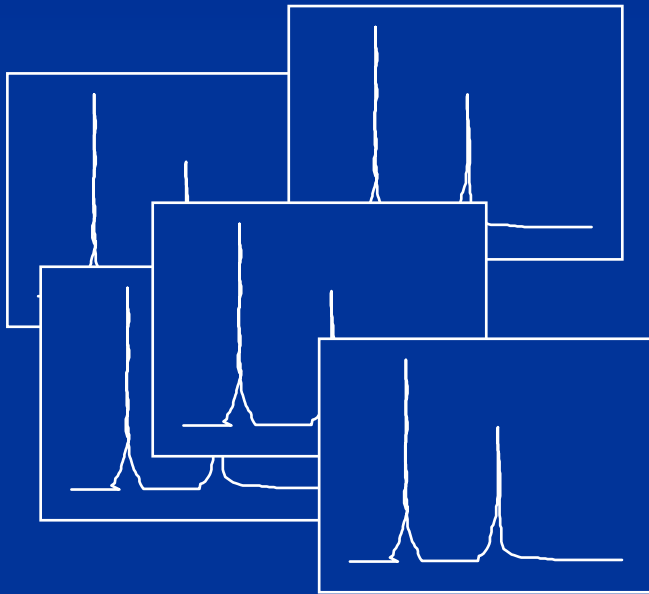




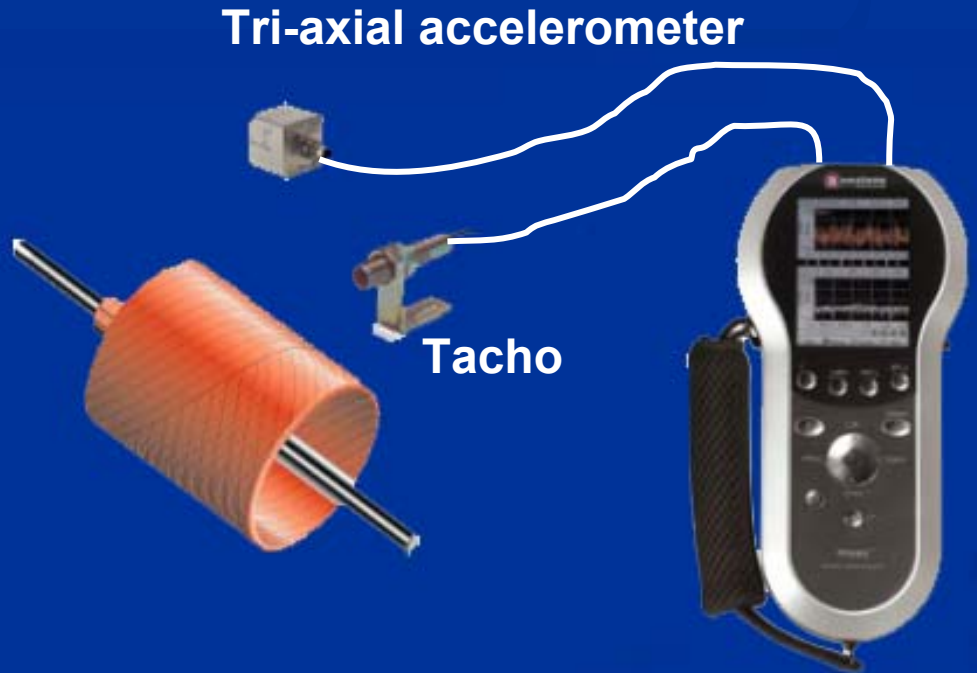
Application note

**Operational Deflection Shape Analysis
with impaq**

With impaq, you can do ODS analysis by collecting **complex spectrum with external triggering**



Complex spectrum



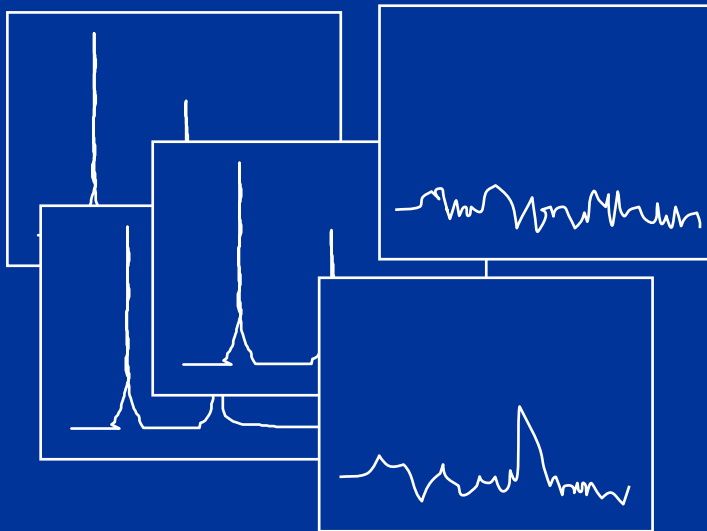
Tri-axial accelerometer

Tacho

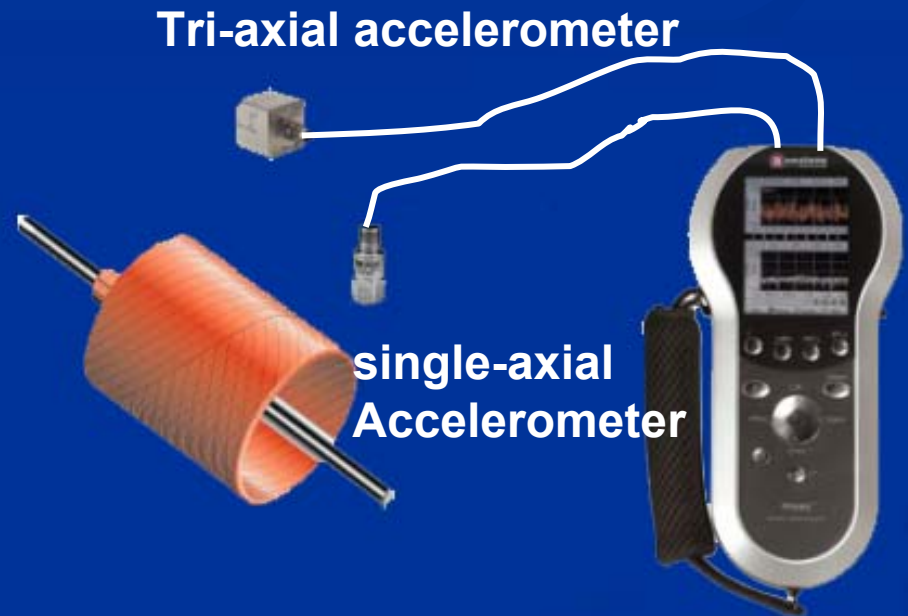
Or, you can do ODS analysis by collecting

FRF and power spectrum

(All the FRF's are referenced to the single-axial accelerometers at a fixed location)



FRF and power spectrum

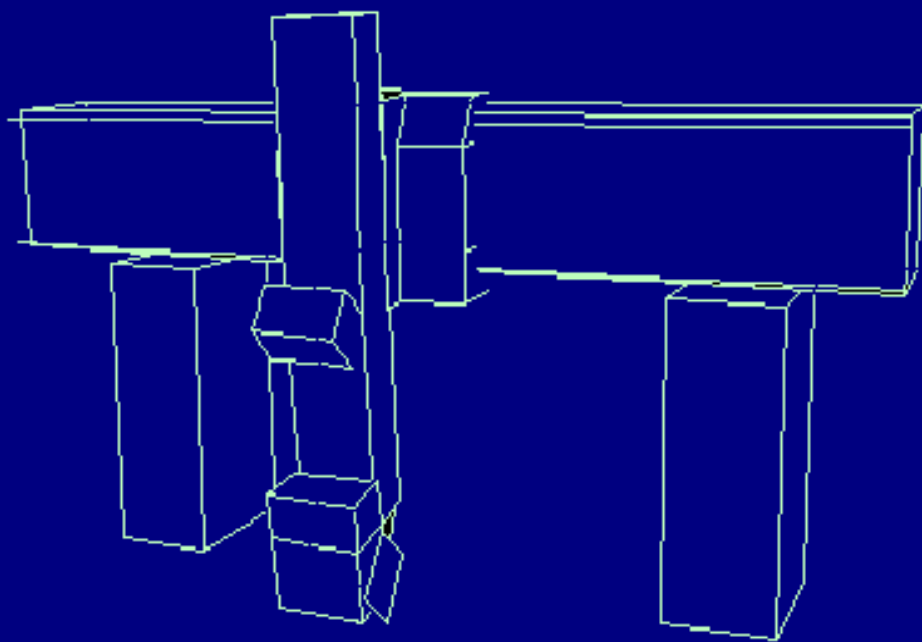


With impaq, all the data can be simultaneously acquired with a tri-axial accelerometer. That makes you in-field measurement easy and enjoyable.

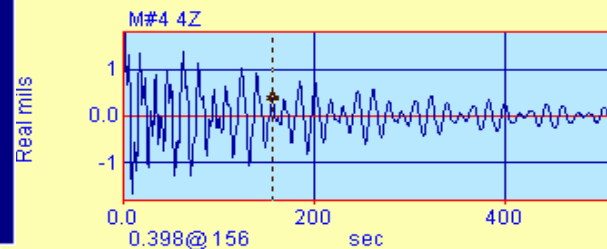
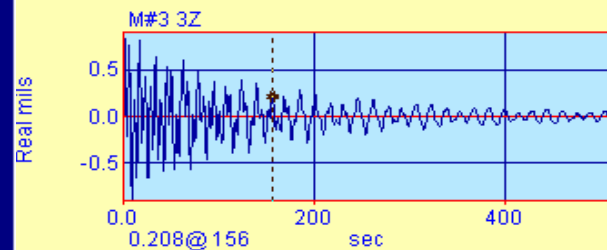
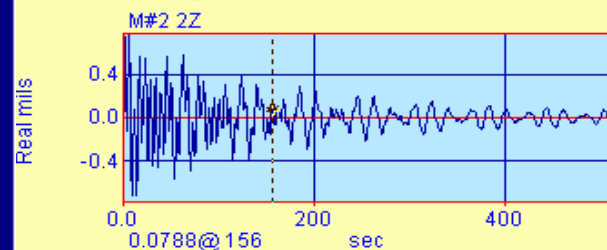
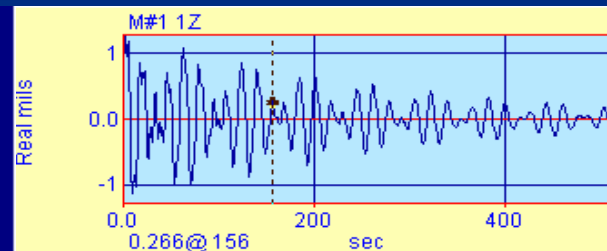


The test data can be easily imported to a post analysis software for shape animation.

3DView Complex Shape 3 - 33.31729Hz



Amp: 0.5, Dwell: 12
Dir: X,Y,Z Persp: +100

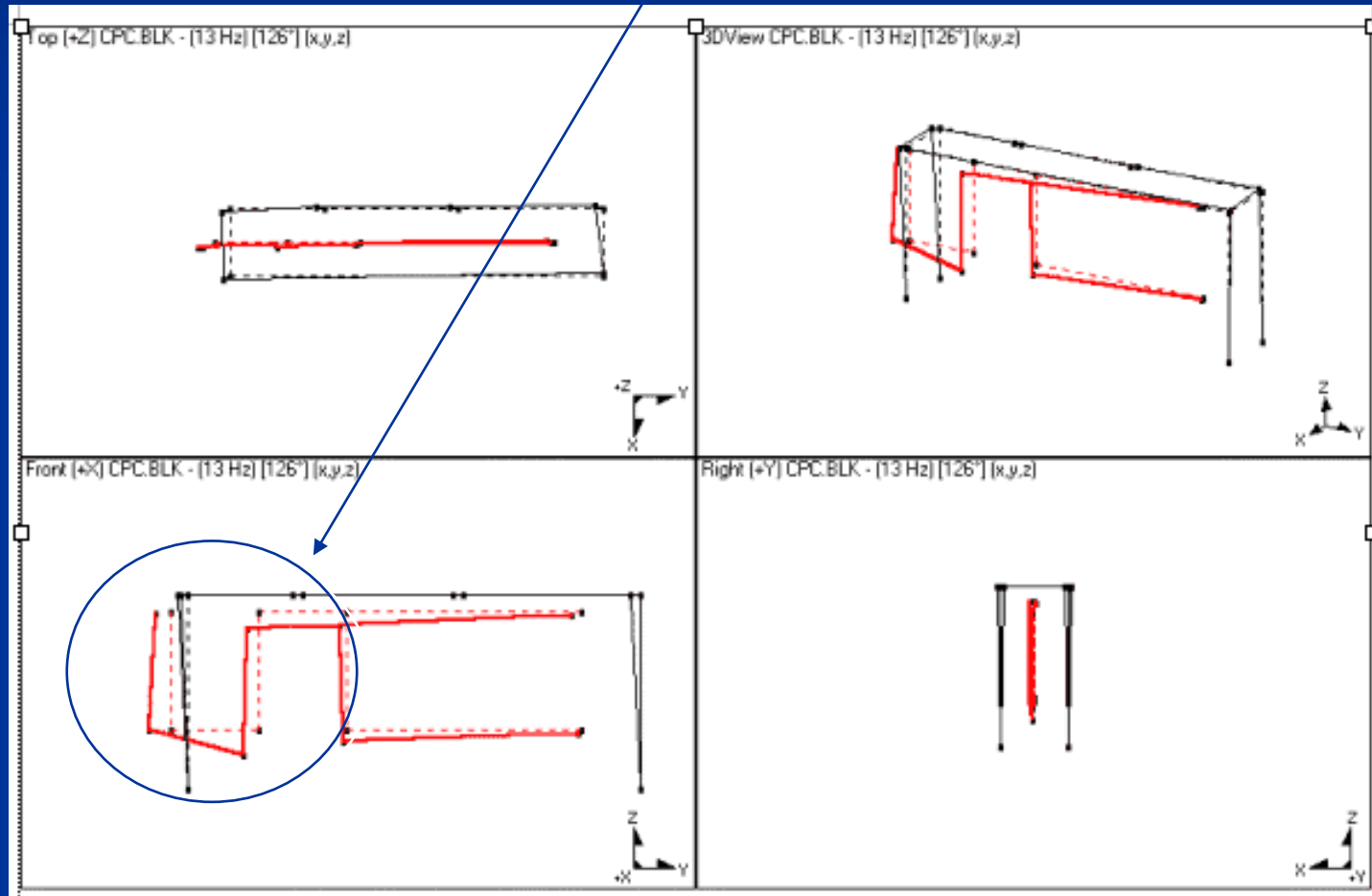


Example: improve the piping vibration of a reciprocating gas compressor



A reciprocating gas compressor has severe piping vibration of 28 mm/s@13Hz. This is due to the resonance of the piping structure.

With ODS analysis, the vibration shape was investigated, and the **weak point** of the structure was found



With ODS analysis, a countermeasure was proposed to reinforce the structure, and the piping vibration was reduced to 5.6mm/s

