

Systems
&
Solutions

Engineered
vibration testing
solutions for
improved
product quality.

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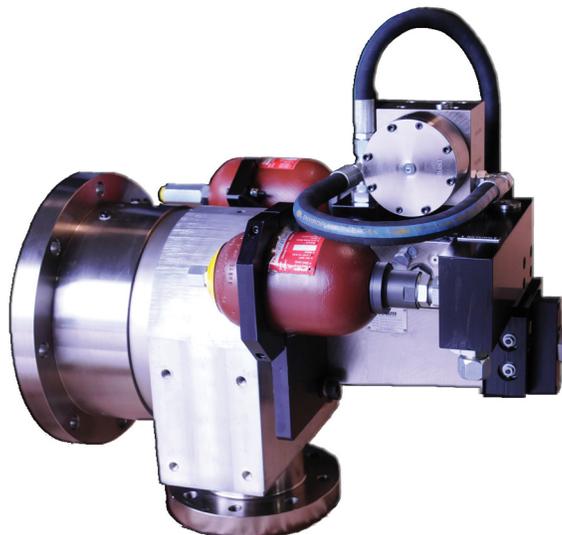
Acoustic Vibration

Test Systems

Team Corporation has been involved with the design, manufacture, application and installation of acoustic generators for more than 40 years. *Team's* acoustic generator is the result of many years of design experience and the evolutionary development of an original acoustic generator patented by the Aircraft Division of Northrop Corporation. *Team* worked with Northrop as a supplier and subcontractor from the inception until it acquired the patent in 1973.

Acoustic chamber testing is used to duplicate the noise environment witnessed by components and subassemblies in aeronautical and space vehicle applications. For example, the noise from a jet engine can acoustically couple high frequency energy into underwing munition assemblies. Or the high acoustic energy generated by rocket engines generate can induce stress in shuttle bay mounted components. The addition of a single or multi-axis vibration test system can realistically duplicate the acoustic and acceleration environments of these high-energy locations in a laboratory environment.

The Mark VI.2 Acoustic Generator consists of a servo-hydraulic actuator driving a specialized reciprocating poppet valve that provides modulation of a high-pressure airstream. This design has proven to be the most effective sound source for large reverberant and progressive wave tube test chambers, providing extreme power handling capabilities with high efficiency. Peak acoustic pressures of approximately 60% of the supply pressure are produced downstream of the poppet valve.



Specifications

Acoustic Power Output

150,000 Acoustic Watts

- Rated at a flow of 3000 SCFM and 200 PSIG

Frequency Response

- Poppet valve response
- Frequency Content of Acoustic Noise
- Output to 10,000 Hz

0 - 1,000 Hz

Dynamic Range (SPL)

- 25 dB Re Full rated output

Hydraulic Actuator

- Piston Area
- Stroke
- Dynamic Force
- Static Force

1.5 sq. in.

0.3 in.

3000 Lb., @ 3000 PSI hydraulic pressure

4500 Lb., @ 3000 PSI hydraulic pressure

Servo Valve

- Flow Capacity
- Voice Coil Resistance
- Field Coil Resistance
- Centering Spring Rate

140 in³/sec @ 200 Hz

7-8 Ohms

100 Ohms

1000 lb/in

Accumulators

- Volume

1 pint

Hydraulic Supply

- Flow required
- Return Pressure
- Drain Pressure
- Full Flow Filtration

30 GPM @ 3000 PSI

100 PSI

<10 PSI

3 Micron Absolute

Air Supply

- Flow Required
- Pressure

1500 SCFM

200 PSIG

General Arrangement

