



NEW from ETS Solutions

ETS Solutions new 3-axis (simultaneous) vibration testing system shown in the photos and drawing below. This system as shown incorporates three 5-ton shakers and is designed to meet new requirements coming in both aerospace and automotive worlds for 3-axis testing.

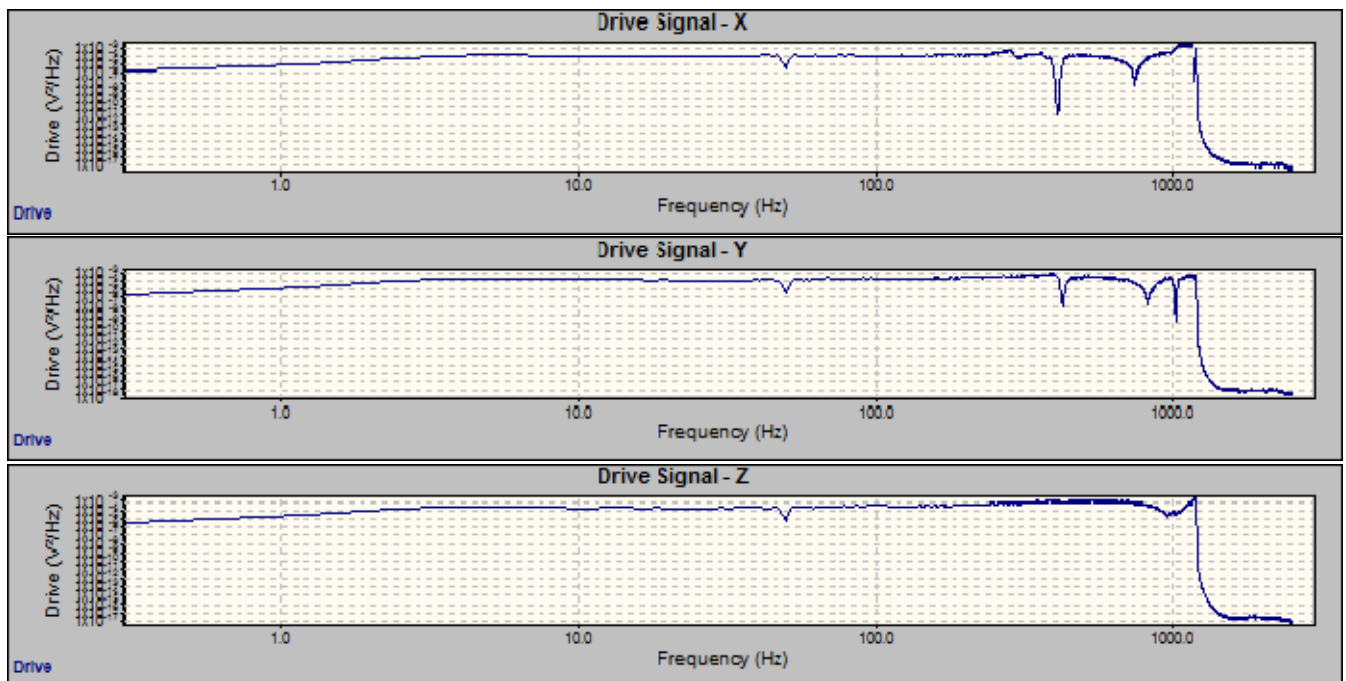
Sine force:	3 x 11,240 lbf
Random force:	3 x 7870 lbf
Shock force:	3 x 22,480 lbf
Max payload:	1100 lbf
Usable frequency range:	5 – 2000 Hz
Max displacement:	1.57 in
Max velocity:	39.4 in/sec
Effective moving mass:	396 lb

The 3-axis system is basically the combination of three of ETS Solutions 11,000 lbf MPA712/M544A shakers. The key to the superior performance of the system is ETS patented high-pressure hydrostatic spherical adapters. There are a total of six with three in the Z-axis, two in the X-axis and one in the Y-axis.

Vibration Research hooked-up the new VR9500 controller(s) and after several runs announced it was near perfect and absolutely the cleanest 3-axis system they had been involved with.

Comment by Vibration Research:

Here are some plots from the ETS 3-axis shaker run. This test was 5 GRMS. The test profile for the customer was to 1200 Hz. We show the out-of-band data out to about 2500 Hz. The only real blip is at about 405 Hz in the X-axis, but it isn't bad. You do see the 50 Hz noise from the two separate grounding points we had, but this is resolved with common grounding points for controllers, shaker and amplifier.



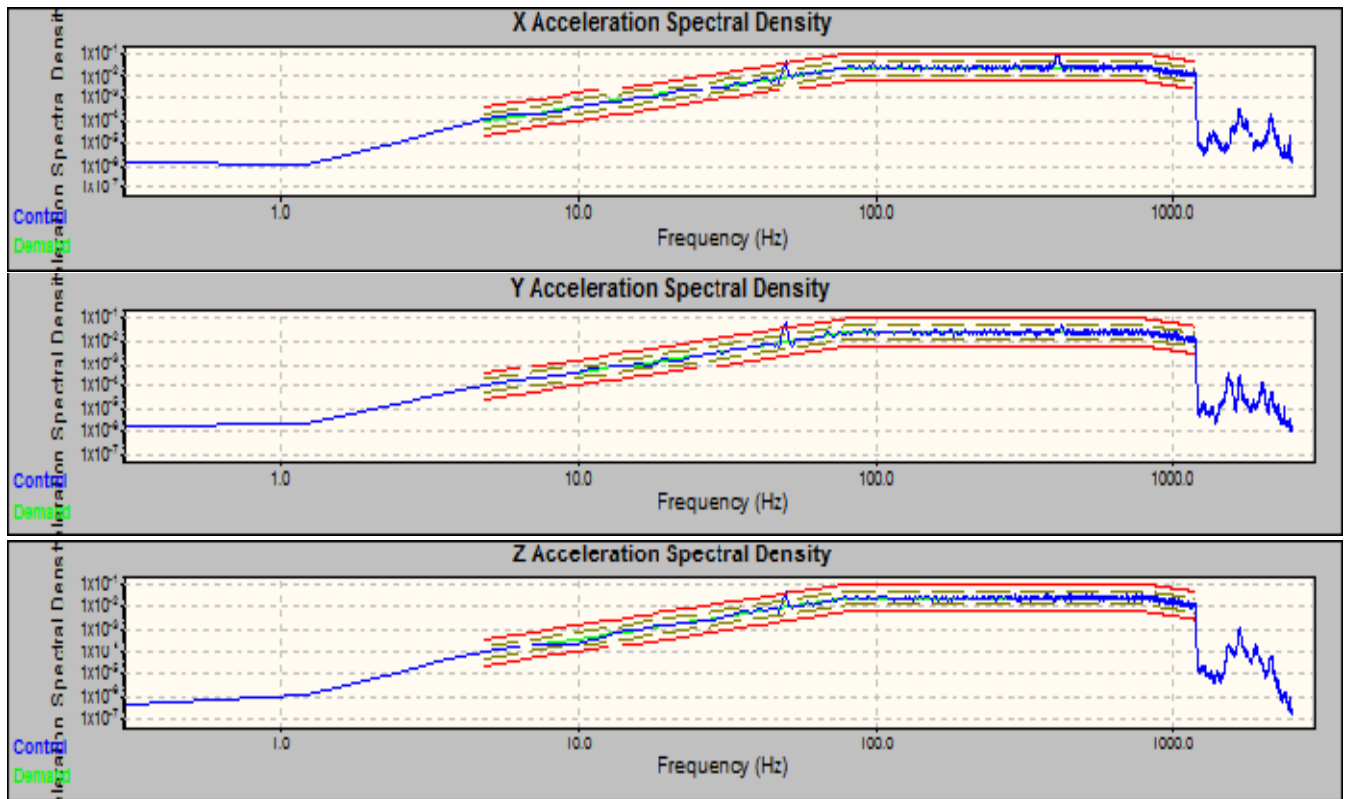


Photo of 3 axis Hydrostatic Spherical Bearing Configuration

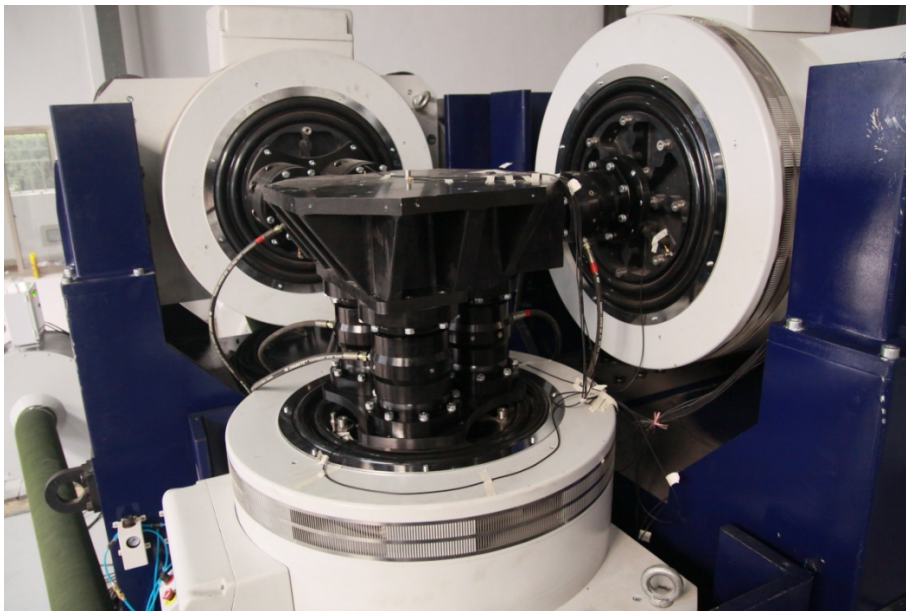


Photo of 3 Axis System with Blower



3 Axis Isometric Showing Z (3), Y (1) and X(2) Hydrostatic Spherical Adapters

