

Servo-Hydraulic Static and Dynamic Integrative Universal Testing System  
PWS-50B (50 KN Load Capacity)



**Main Application:**

This machine is Mainly used to make test on Metal / Non-metal materials and other component parts for the Traction / Compression / High-Low frequency fatigue testing experiments. By equipping with different software, this machine is able to achieve all kinds of mechanical function experiments. PWS series Fatigue testing machine is widely be adopted by Aerospace industry, Vessel Production and Military industries for the material fatigue testing.

**Specifications:**

1. Max static load capacity:  $\pm 50\text{kN}$
2. Max dynamic load capacity:  $\pm 50\text{kN}$ , fluctuation range less than  $\pm 2\%$  of full scale.
3. Actuator swing:  $\pm 50\text{mm}$  with accuracy from 20% less than  $\pm 0.5\%$  of full scale.
4. Frequency range: 0.1 ~ 50Hz
5. Main Test curve: Sine wave, Square wave, Triangle wave, Oblique wave and other input wave.
6. Distance of two columns: 600mm
7. Max testing space: large than 900mm, Large than 400mm (+ hydraulic Clamps)
8. Servo-Hydraulic Pumping station: 46L/min, 21Mpa, Power 22KW
9. Calculator capacity:  $10^8$

**Part 1**



Solid steel for high stiffness and chrome plated for long life and easy cleaning.  
Precision machining maintains load unit alignment over their entire length.

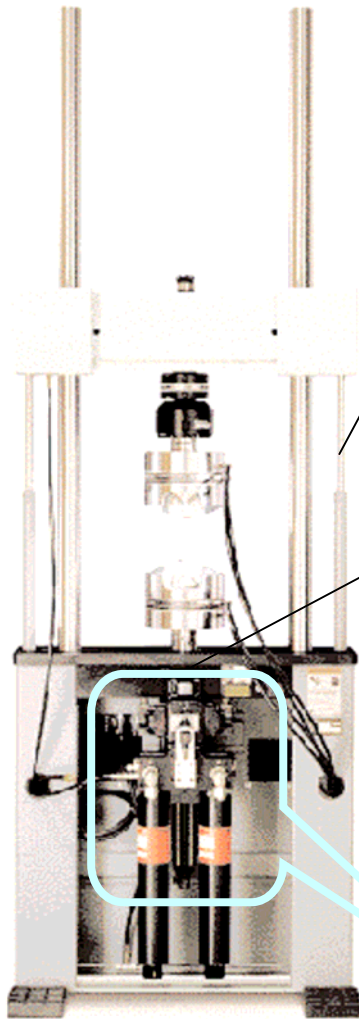
Designed for a high natural frequency.  
High stiffness for precise displacement measurement and increased dynamic performance.

Strain gage design is accurate for both static and dynamic testing.  
Many force ratings are available to you're your specified needs.

**Grips and fixtures**  
The largest variety of hydraulic and mechanical grips and loading fixtures are available  
Flat: 0-6mm、6-12mm、12-18mm、18-21mm  
Round:  $\phi$  5-  $\phi$  10、  $\phi$  10-  $\phi$  15、  $\phi$  15-  $\phi$  20、  
 $\phi$  20-  $\phi$  25



Puts control of the hydraulic lifts and locks for repositioning the crosshead at a convenient location.  
Emergency stop shuts off hydraulics.

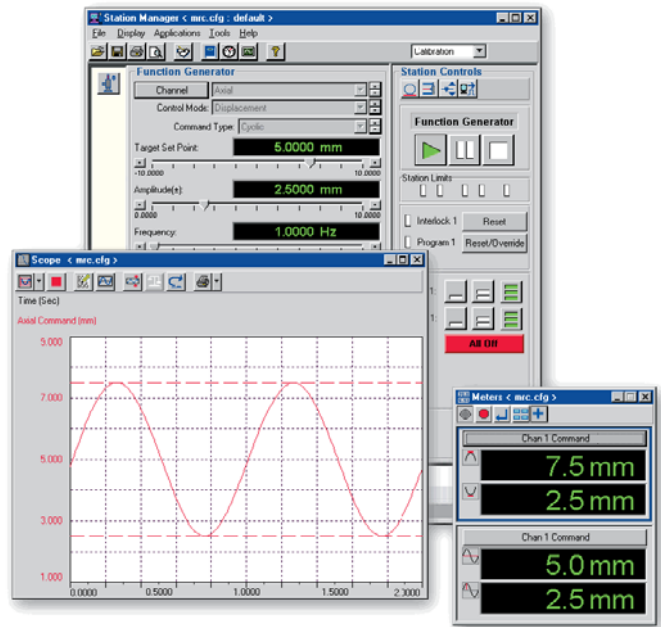


**Hydraulic lifts and locks**  
Allow easy repositioning of the crosshead and fast crosshead locking/unlocking.

**Hydraulic actuator**  
Integrally mounted in the base plate to shorten the force train for increased stiffness, better side load capability, and more accurate test results.  
Available in a variety of force ratings and stroke lengths.  
Includes a co-axially mounted displacement transducer for precision displacement control and measurement.



**Part 2**



**MTS 407 controller control panel provides convenient access—at the load frame or test stand—to all the controls you need to properly load specimens. In addition to hydraulic controls and an interlock indicator, it provides run, stop, and hold controls; a display screen and function keys; and an actuator positioning control for specimen loading. Once a specimen is loaded, transducers can be auto-zeroed from the computer, or from the remote station control using the control panel’s function keys.**

Part 3



BST系列恒压伺服泵站

- Hydraulic power unit (BST) will fit your needs.
- This super-quiet pump operates at very low noise level.
- The BST provides a 21~22 Mpa Hydraulic pressure for both Hydraulic grip and the actuator itself. This Integrated system including the hydraulic system components and servo hydraulic valve, electrical disconnect, motor starters, and control logic. Simply connect electric power and water to the unit and it's ready to run.