NEOMETRIX
The Complete Engineering Solution Company

Catalog

Servo Actuator Test Rig
The Neometrix Engineering NE-A0631 Series Servo Actuator Test Stands come in a variety of loading configurations. These Test Stands are designed for testing of all kinds of state of the art dealing Servo Hydraulic Actuator. Force measuring is achieved by means of a load cell embedded within the actuator. This option offers a direct method for obtaining electronic data relating to the force being applied by the actuator. The strain gauge load sensor is mounted inside the actuator’s case in a compact and protected robust design.

**Servo hydraulic actuators in various aircrafts like SU-30, Jaguar, and Mirage, MI-8, MI-17 helicopter etc. of Western / Russian origin.** Some of the components tested on these STANDS are as:

- Rudder Actuators
- Tail Plane Actuators
- Booster Actuators in Aircrafts
- Main Rotor Actuators
- Tail Rotor Actuators in Helicopters.

These Test Stands are used for **Performance testing as well as Endurance Testing** of these Actuators.

This is a TEST STAND required in every ground support & testing establishment. The Test STAND comes with Servo Hydraulic Pilot Actuators, Servo Hydraulic Loading Actuators. High frequency FRA: Frequency Response Analysis related tests are done on these Test Stands.


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**Key Features :-**

- **Cost effective, accurate, automated, software driven, highly capable test system.**
- **Fully Computerized, Manual & Semi-Automatic also available.**
- **PXI based Data Acquisition & Control System.**
- **Independent Hydraulic Power Packs for UUT, Loading Actuator & Pilot Actuator.**
- **Pilot Actuator can vary the load from 50N to 50KN.**
- **Operating Pressure: up to 3,000 PSI. Flow: up to 40 LPM.**
- **Static Pressure: up to 10,000 PSI.**
- **Temperature control of hydraulic test circuits. (Chilled Water required).**
- **This test stand has Loading Actuator which simulates Linear Spring action through the Servo-Hydraulics by the use of the Servo-Valves, Displacement Transducer and Load Cell Linear Spring action thru ServoHydraulics by the use of servo valve, Displacement transducer & Load Cell.**
For more details and for ordering please visit [www.neometrix.in](http://www.neometrix.in) or write to us on [contact@neometrix.in](mailto:contact@neometrix.in)
## Technical Specification of the Servo Hydraulic Actuator Test Rig

<table>
<thead>
<tr>
<th>S.N</th>
<th>Parameters</th>
<th>Range Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Working Fluid</td>
<td>Hydraulic Oil- OM-15/AMG-10-GOST-6754-53</td>
</tr>
<tr>
<td>02</td>
<td>Max. Pressure which can build in the System</td>
<td>210 Bar</td>
</tr>
<tr>
<td>03</td>
<td>Return Back Pressure</td>
<td>0-10 Bar</td>
</tr>
<tr>
<td>04</td>
<td>Unit Working Pressure</td>
<td>60-65 Bar in Check mode</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42-73 Bar in Functional mode.</td>
</tr>
<tr>
<td>05</td>
<td>Hydraulic Fluid Temperature</td>
<td>Up to 80 °Celsius</td>
</tr>
<tr>
<td>06</td>
<td>Flow Rate (Leakage indicator of working fluid)</td>
<td>Visual as well as Digital Fluid Indicator</td>
</tr>
<tr>
<td>07</td>
<td>Permissible Contamination Level</td>
<td>Up to count 12 of NAS 1638</td>
</tr>
<tr>
<td>08</td>
<td>Leak Measurement Range</td>
<td>0-2000 cc, 0-2000ml, 0-2ltrs.</td>
</tr>
<tr>
<td>09</td>
<td>Electric Motor Details</td>
<td>15 KW , 1450 RPM , 3-Ø Induction Motor</td>
</tr>
<tr>
<td>10</td>
<td>Operating Principle</td>
<td>Software Controlled Hydro-Electro Mechanical</td>
</tr>
<tr>
<td>11</td>
<td>Loading Actuator Performance Range</td>
<td>For Max. 2350 Kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For 1500 kg during running in Test</td>
</tr>
<tr>
<td>12</td>
<td>Weight Test</td>
<td>Pulley weight arrangement for Static Load up to 50 kg</td>
</tr>
<tr>
<td>13</td>
<td>Cooling</td>
<td>Chilled Water</td>
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<tr>
<td>14</td>
<td>Heating</td>
<td>Automatically through the Pump flow over relief</td>
</tr>
<tr>
<td>15</td>
<td>Hydraulic System</td>
<td>Further Sub-divided into main &amp; Duplicate System</td>
</tr>
<tr>
<td>16</td>
<td>Integrated Static Leak Facility</td>
<td>Up to 2m column</td>
</tr>
<tr>
<td>18</td>
<td>Weight Loading System</td>
<td>Which apply Load on Pilot arm of Unit Actuator</td>
</tr>
</tbody>
</table>

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Hydraulic System

➢ Testing / fittings of compression type & certified SS316 Material.
➢ Sampling port for Oil Quality Measurement.
➢ All Selector Valves with built in integrated facility of Automatic/Manual operation.
➢ All Instrument/Gauges with integrated facility of in situ calibration.
➢ Dip Tray with Drain Holes.

Mechanical System

➢ Provision of Servo Hydraulic Actuator (Simulate load spring characteristic) for Load generation
➢ Provision of Load cells, LVDT & encoder for displacement measurement

Electronics and Instrumentation

➢ PXI based industrial computer.
➢ UPS- 750 VA.
➢ Laser ink jet Printer.
➢ 17” Touch screen Industrial Computer.
➢ Visual alarms Buzzer for warnings.
➢ Stand by Industrial Computer with monitor.
➢ Digital indicator for flow rate
➢ Digital temperature indicator for inlet & outlet of working fluid.
➢ Digital Indicator for Load & Displacement.
➢ Visual level clogging indication on panel.
➢ All data recording in DAQ system Integrated facility to
Integrated facility for software as well as manual operation.
Icon based graphical application.
PC compatible hardware with window-XP.
User friendly software with feature for test mode, automatic mode, system maintenance mode, sensor calibration, test rig. Troubleshooting & diagnostics.
The detailed hydraulic circuit for Servo Actuator test rig, we actually supposed to design detailed hydraulic circuit drawing in which all the necessary information is shown & also provides its corresponding BOM, which is very worthy for the user’s to understand the Hydraulic circuit.

This Hydraulic Circuit is design for Max Pressure: - 200 Bar & Max. Flow: - 40LPM & also this system have very high class filtration level up to 3μ.
This is our servo actuator Test Rig Hydraulic Power Pack System. This is neatly designed for easy maintenance. Power pack has attachable junction box this is clearly shown from the picture. It has all the interlocking hardware inside it & also has emergency buttons for safety purpose of the system.

This power pack is single unit in-itself because it is run through from the main panel as well as its control panel box. In the next picture shown power pack components & hydraulic piping inside the panel is clearly shown. All the component piping connection is easily Open & closed. This system consist very compact hydraulic system & this is tested for Max. Pressure.

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Neometrix Featured Products

Fuel (ATF) Pump Test Stand

Hydraulic Pump Test Stand

Universal Hydraulic Test Stand

Oxygen Component Test Stand

Electrical Component Test Stand

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