Universal, Independent Dual System Hydraulic Test Stand Features:
1. Dual Independent Hydraulic Test System for Testing All Hydraulic Components Such As Reducing Valves, Linear Actuators and Related Components
2. Universal Hydraulic Test Stand Hydraulic Pump and Motor Test System for Testing All Hydraulic Pumps and Motors
UNIVERSAL, INDEPENDENT DUAL SYSTEM
HYDRAULIC TEST STAND

Dual Independent Hydraulic Test System for Testing
All Hydraulic Components Such As Reducing Valves, Linear
Actuators, and Related Components

STANDARD FEATURES AND SPECIFICATIONS FOR
THE DUAL INDEPENDENT HYDRAULIC TEST SYSTEM:

- **Completely Independent Dual System**
  - Each System May be Used Independently or Combined Together for Maximum Flows
  - Will Deliver Different Pressures and Flows Simultaneously
  - Two Separate Work Stations for System A & B

- **System A**
  1. Oilgear® Pump
  2. Lincoln® Motor
  3. Complete Pressure Adjustment (450 – 5000 PSI)
  4. Complete Flow Adjustment (0 – Full GPM)
  5. Pressure and Return Ports
  6. Digital Pressure Gauges (.25% Accuracy)
  7. Digital Supply and Return Flow Meters (1% Accuracy)
  8. Safety Over Pressure Relief Valve
  9. By-Pass Dump Valve
  10. Pump Flow Control Valve
  11. Pump Pressure Control Valve

- **System B**
  1. Oilgear® Pump
  2. Lincoln® Motor
  3. Complete Pressure Adjustment (450 – 5000 PSI)
  4. Complete Flow Adjustment (0 – Full GPM)
  5. Pressure and Return Ports
  6. Digital Pressure Gauges (.25% Accuracy)
  7. Digital Supply and Return Flow Meters (1% Accuracy)
  8. Safety Over Pressure Relief Valve
  9. By-Pass Dump Valve
  10. Pump Flow Control Valve
  11. Pump Pressure Control Valve

- **Five Pumps**
  1. Oilgear® System A Pressure Compensated Pump
  2. Oilgear® System B Pressure Compensated Pump
  3. S/C® High Pressure Intensifier Pump (10,000 PSI)
  4. Work Sink Drain Pump
  5. Reservoir Kidney Loop Pump

- **Instrumentation – All Gauges Feature Easy Programmability for Field Calibration**

- **Five Digital Flow Meters (1% Accuracy)**
  1. System A Pump Supply Flow
  2. System B Pump Supply Flow
  3. System A Return Flow
  4. System B Return Flow
  5. Low Range (.4 – 7 GPM)

- **Seven Digital Pressure Gauges (.25% Accuracy)**
  1. System A Supply Pressure
  2. System B Supply Pressure
  3. Return Back Pressure
  4. Low Independent Pressure Gauge
  5. Medium Independent Pressure Gauge
  6. High Independent Pressure Gauge
  7. Intensifier Pressure Gauge

- **Air Over Oil Intensifier**
  1. Digital Pressure Gauge (.25% Accuracy)
  2. Air Shut-Off Valve
  3. Air Regulator
  4. Safety Over Pressure Relief Valve
  5. By-Pass Dump Valve
  6. Dedicated Port

- **Safety Features**
  1. Two Ergonomically Located Emergency Stop Switches
  2. Safety Over Pressure Relief Valves for both System A and B
  3. Safety Drip Pan Completely Covers Bottom to Ensure Clean Floors
  4. All Electrical Components Installed in NEMA 4, 12 Enclosure
  5. All Gauges are Fully Enclosed in NEMA 4. 12 Enclosure with a Clear Front Safety Glass Cover
  6. Operational LED Warning Indicator Lights
  7. Dual Heavy Duty Floor Locks to Ensure Stability
  8. Optional Safety Glass Sliding Doors for Work Sink

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ap-hydraulics.com
UNIVERSAL, INDEPENDENT DUAL SYSTEM
HYDRAULIC TEST STAND

Dual Independent Hydraulic Test System for Testing
All Hydraulic Components Such As Reducing Valves, Linear
Actuators, and Related Components

- **Super Clean Filtration** — *Industry Leading Filtration Ensures Quality While Increasing Aircraft Component Life*
  - System A & B High Efficiency, Non-Bypass Pressure Filters (3 Micron Absolute)
  - Reservoir Kidney Loop Filter (3 Micron Absolute)
  - Sink Drain Filter (3 Micron Absolute)
  - Reservoir Fill Pump Filter (3 Micron Absolute)

- **4-Way Directional Flow Control Valve**
  Manually Operated 4-Way Directional Flow Control Valve with Complete Flow Control to Either Port A or Port B

- **Hedland® Digital Low Flow Return Meter with Electric Selector Valve** for Testing Internal Leakage of Components (.4 - 7 GPM Standard)

- **Operational Warning Lights**
  1. System A & B Pressure Filter Condition LED Warning Indicator for Clogged Conditions
  2. Kidney Loop Pump Filter Condition LED Warning Indicator for Clogged Conditions
  3. Reservoir Low Level LED Warning Indicator
  4. High Fluid Temperature LED Warning Indicator

- **3 Each Stand Alone Noshock® Pressure Gauges (.25% Accuracy)**
  * Suggested Ranges 0-60 PSI, 0-1000 PSI, 0-7500 PSI
  * Over Pressure Gauge Savers on All Gauges

- **Reservoir Kidney Loop Pump**
  - Continuously Filters Fluid
  - Continuously Cools Fluid

- **Automatic Oil Temperature Control**
  - Panel Mounted Oil Temperature Set Point
  - Digital Oil Temperature Gauge

- **Return Back Pressure for Dynamically Loading Components**
  - Return Back Pressure By-Pass Valve
  - Return Back Pressure, Pressure Adjustment Valve
  - Return Back Pressure, Pressure Gauge
  - Return Back Pressure Flow Meter

- **Additional Features**
  - All Welded, 14 Gauge B3 (Brushed Finish) Stainless Steel Cabinet
  - Illuminated Work Area Provided By Overhead Sink Light
  - Test Port for all Pressure Gauges
  - Easy Access Exterior Fluid Sampling Valve to Meet Quality Parameters
  - Safety Drip Pan Completely Covers Bottom
  - Work Sink with Perforated Metal Grating
  - Heavy Duty All Welded 1/4" Think Wall Tubing Frame with Fork Lift Brackets
  - Easy Maneuvering Ensured by Two Fixed and Two Swivel Castors with Stability Provided by the Heavy Duty Floor Lock
  - Work Sink Drain Pump with Filter (4 GPM)
  - Durable Laser Engraved, Aluminum Placards
  - Panel Mounted Operational Instructions
  - Current Pressure Gauge and Flow Meter Certificates of Calibration
Series 920 Hydraulic Test Stand Schematic
HYDRAULIC PUMP TEST STAND

Universal Hydraulic Test Stand - Hydraulic Pump and Motor
Test System for Testing All Variable and Fixed Displacement Pumps

STANDARD FEATURES AND SPECIFICATIONS FOR HYDRAULIC PUMP AND MOTOR TEST SYSTEM:

- **Supply Port**
  1. Digital Supply Pressure Gauge (.25% Accuracy)
  2. Supply Throttle
  3. Supply Pressure Adjustment (0-200 PSI)
  4. Digital Oil Temperature Gauge
  5. Automatic Supply Pressure Control
  6. Precise Supply Pressure Regulator

- **Pressure Port**
  1. Load Valve
  2. By-Pass Dump Valve
  3. Digital Pressure Gauge (.25% Accuracy - 0-600 PSI)
  4. Digital Oil Temperature Gauge
  5. Digital High Pressure Flow Meter (.1% Accuracy)

- **Case Drain Port**
  1. Load Valve
  2. By-Pass Dump Valve
  3. Digital Pressure Gauge (.25% Accuracy - 0-600 PSI)
  4. Digital Oil Temperature Gauge
  5. Digital Flow Meter (.4 - 7 GPM - 1% Accuracy)
  6. Case Drain Sump Tank
     Allows Pressure Adjustment from (0-200 PSI)

- **Super Clean Filtration** – *Industry Leading Filtration Ensures Quality While Increasing Aircraft Component Life*
  - Pump Outlet Filter
  - Supply Port Filter
  - Loop Pump Filter with LED Filter Condition Warning Indicator
  - Supply Tank Desiccant Filter
  - Sump Tank Filter

- **Instrumentation** – All Gauges Feature Easy Programmability for Field Calibration

  - **Two Digital Flow Meters (1% Accuracy)**
    1. Pump Flow Outlet
       (Refer Model Number for Flow Range)
    2. Case Drain Flow (.4 – 7 GPM)

  - **Four Digital Pressure Gauges (.25% Accuracy)**
    1. Supply Tank Pressure (0 - 200 PSI)
    2. Supply Port Pressure (0 - 200 PSI)
    3. Pump Outlet Pressure (0 – 5000 PSI)
    4. Case Drain Pressure (0 – 200 PSI)

- **Oil Temperature Control - Two Extra Capacity Oil Coolers to Ensure 100% Duty Cycle**
  1. Extra Capacity Pump Outlet Load Valve Oil Cooler
  2. Loop Pump Oil Cooler That Will Continuously Cool Fluid

- **Safety Features**
  1. Ergonomically Located Emergency Stop Switch
  2. Safety Over Pressure Relief Valve
  3. Safety Drip Pan Completely Covers Bottom to Ensure Clean Floors
  4. All Electrical Components Installed in NEMA 4, 12 Enclosure
  5. All Gauges are Fully Enclosed in NEMA 4, 12 Enclosure with a Clear Front Safety Glass Cover
  6. Operational LED Warning Indicator Lights
  7. Dual Heavy Duty Floor Locks to Ensure Stability
  8. Optional Safety Glass Sliding Doors for Work Sink
  9. Supply Tank Over Pressure Relief Valve

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HYDRAULIC PUMP TEST STAND

Universal Hydraulic Test Stand - Hydraulic Pump and Motor
Test System for Testing All Variable and Fixed Displacement Pumps

STANDARD FEATURES AND SPECIFICATIONS FOR HYDRAULIC PUMP AND MOTOR TEST SYSTEM:
- The Pump Test Stand (PTS) is Designed for Testing All Fixed and Variable Displacement Pumps
- Precise Digital Pressure Gauges
- High Accuracy Digital Flow Meters
- Stainless Steel Pressure Supply Tank (175 Gallons)
- 5000 PSI Working Pressure
- All Gauges Enclosed in Skydrol Proof Enclosure
- Stainless Steel Construction
- Heavy Duty Work Sink with Grating
- Sink Drain Pump with Filter
- Loop Pump for Reservoir, Continuously Filters and Cools Fluid
- High Capacity Loop Pump Filter and Pump Outlet Filter
- LED Warning Indicators for Loop Filter, Supply Tank Low Level, and High Fluid Temperature
- Dual, Extra Capacity Water to Oil Coolers
- Automatic Oil Temp Control
- Guaranteed No Leaks, Safety Pan Completely Covers Bottom
- Current Pressure Gauge and Flow Meter Certificates of Calibration

VARIABLE FREQUENCY DRIVE FEATURES:
- Eaton® All Digital Variable Frequency
- Panel Mounted Controls
  1. Master Switch
  2. Emergency Stop Switch
  3. RPM Control Switch – High Resolution Potentiometer
     (0-6000 RPM Adjustable Speed)
     (10,000 RPM Available)
  4. Rotational Switch
- Digital Readouts
  1. Panel Mounted Tachometer RPM
  2. Motor Over Voltage
  3. Motor Over Current
  4. Motor Over Temperature
  5. Ground Fault
  6. Output Phase Supervision
  7. Encoder Fault

Dimensions:  Length 225” Width 85” Height 88”

<table>
<thead>
<tr>
<th>SERIES MODEL</th>
<th>PUMP PRESSURE (PSI (bar))</th>
<th>COMBINED TOTAL MOTOR HP (kw)</th>
<th>COMBINED TOTAL PUMP FLOW 50 Hz GPM (lpm)</th>
<th>60 Hz GPM (lpm)</th>
<th>PUMP TEST VARIABLE DRIVE HP (kw)</th>
<th>WEIGHT Lbs. (kg)</th>
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</thead>
<tbody>
<tr>
<td>07-922,**</td>
<td>450 - 5000 PSI 30 - 340 bar</td>
<td>120 HP  88 kw</td>
<td>41 GPM 155 lpm</td>
<td>50 GPM 189 lpm</td>
<td>100 HP  75 kw</td>
<td>5700 lbs 2528 kg</td>
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<tr>
<td>07-924,**</td>
<td>450 - 5000 PSI 30 - 340 bar</td>
<td>150 HP  112 kw</td>
<td>54 GPM 204 lpm</td>
<td>65 GPM 246 lpm</td>
<td>125 HP  93 kw</td>
<td>6700 lbs 3039 kg</td>
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<tr>
<td>07-926,**</td>
<td>450 - 5000 PSI 30 - 340 bar</td>
<td>200 HP  149 kw</td>
<td>66 GPM 250 lpm</td>
<td>80 GPM 302 lpm</td>
<td>150 HP  112 kw</td>
<td>7700 lbs 3492 kg</td>
</tr>
</tbody>
</table>

**Model by Fluid Type:  Mil-H-5606 = 02  Mil-H-83282 = 03  Skydrol = 05

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Series 920 Pump Test Stand Schematic
Ordering Instructions

Step 1: Determine Size of the Hydraulic Test Stand Required, Refer to Aircraft's Component Overhaul Manuals For:
A. Maximum (GPM) Gallons Per Minute
B. Maximum (PSI) Pound Per Square Inch
C. Testing Procedures and Operation of Components

Step 2: Refer to Aircraft's Component Overhaul Manuals for Type of Hydraulic Fluid.

Step 3: Determine the input voltage the Hydraulic Test Stand will be operated on. When ordering, the most common error is selecting incorrect input voltages 50 Hertz the flow will be reduced by 17%

Step 4: Call A&P Hydraulics experienced sales staff for any questions for explanation of the complete range of Hydraulic Test Stand Options that we offer.

EXAMPLE:
Hydraulic Test Stand – 50 GPM @ 5000 PSI – Skydrol Fluid – 460 Volt 60 Hertz 3 Phase
Optional: Extra Pressure Gauge (0-60 PSI) and Safety Glass Doors

<table>
<thead>
<tr>
<th>CHAR</th>
<th>GPM</th>
<th>LPM</th>
<th>PSI</th>
<th>BAR</th>
<th>HP</th>
<th>KW</th>
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<tr>
<td>922</td>
<td>50</td>
<td>189</td>
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<td>340</td>
<td>120</td>
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<tr>
<td>924</td>
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<td>246</td>
<td>5000</td>
<td>340</td>
<td>150</td>
<td>112</td>
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<tr>
<td>926</td>
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<td>302</td>
<td>5000</td>
<td>340</td>
<td>200</td>
<td>146</td>
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</table>

<table>
<thead>
<tr>
<th>CHAR</th>
<th>VOLT/PHASE/FREQUENCY</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>208V/60Hz/3ph</td>
</tr>
<tr>
<td>1</td>
<td>220V/60Hz/3ph</td>
</tr>
<tr>
<td>2</td>
<td>380V/60Hz/3ph</td>
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<tr>
<td>3</td>
<td>460V/60Hz/3ph</td>
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<tr>
<td>4</td>
<td>570V/60Hz/3ph</td>
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<tr>
<td>5</td>
<td>220V/50Hz/3ph</td>
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<tr>
<td>6</td>
<td>380V/50Hz/3ph</td>
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<tr>
<td>7</td>
<td>415V/50Hz/3ph</td>
</tr>
<tr>
<td>8</td>
<td>440V/60Hz/3ph</td>
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Isolated Digital Pressure Gauge with Port (.25% Accuracy)

<table>
<thead>
<tr>
<th>CHAR</th>
<th>OPTION DESCRIPTION</th>
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<tbody>
<tr>
<td>AB</td>
<td>Pressure Gauge (0-25 PSI)</td>
</tr>
<tr>
<td>AC</td>
<td>Pressure Gauge (0-60 PSI)</td>
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<tr>
<td>AD</td>
<td>Pressure Gauge (0-100 PSI)</td>
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<tr>
<td>AE</td>
<td>Pressure Gauge (0-500 PSI)</td>
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<td>AF</td>
<td>Pressure Gauge (5-1000 PSI)</td>
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<td>AG</td>
<td>Pressure Gauge (0-1500 PSI)</td>
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<td>AH</td>
<td>Pressure Gauge (0-3000 PSI)</td>
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<tr>
<td>AI</td>
<td>Pressure Gauge (0-5000 PSI)</td>
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<tr>
<td>AK</td>
<td>Pressure Gauge 4-20ma Data Acquisition Output</td>
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Isolated Digital Flow Meter with Port (1% Accuracy)

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<tr>
<th>CHAR</th>
<th>OPTION DESCRIPTION</th>
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<tbody>
<tr>
<td>BC</td>
<td>Flow Meter (0.5-2 GPM)</td>
</tr>
<tr>
<td>BD</td>
<td>Flow Meter (2.5-5 GPM)</td>
</tr>
<tr>
<td>BE</td>
<td>Flow Meter (0.1-1 GPM)</td>
</tr>
<tr>
<td>BF</td>
<td>Flow Meter (0.2-2 GPM)</td>
</tr>
<tr>
<td>BG</td>
<td>Flow Meter (1.0 GPM)</td>
</tr>
<tr>
<td>BH</td>
<td>Flow Meter (1-15 GPM)</td>
</tr>
<tr>
<td>BI</td>
<td>Flow Meter (2.5 GPM)</td>
</tr>
<tr>
<td>BJ</td>
<td>Flow Meter (2.5 GPM)</td>
</tr>
<tr>
<td>BK</td>
<td>Flow Meter (4-8 GPM)</td>
</tr>
<tr>
<td>BL</td>
<td>Flow Meter 4-20ma Data Acquisition Output</td>
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<tr>
<td>BM</td>
<td>High Precision Digital Flow Meter (0.25% Accuracy)</td>
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<table>
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<tr>
<th>CHAR</th>
<th>OPTION DESCRIPTION</th>
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<tr>
<td>JJ</td>
<td>Safety Glass Doors</td>
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<tr>
<td>KK</td>
<td>Cuscom Engineering</td>
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<td>LL</td>
<td>Digital Rotary Torquemeter</td>
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<tr>
<td>RR</td>
<td>Riser Rod Sound Proofing</td>
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<tr>
<td>SS</td>
<td>Rotary Torquemeter 10,000 RPM</td>
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<tr>
<td>XX</td>
<td>CE Compliant</td>
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</table>

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