

# NEOMETRIX DEFENCE

## About

### **Hydraulic Hose Burst Testing Machine Upto-3000-Bar**

The Hydraulic Hose Burst Test Machine is a high-performance, fully automated system designed to perform pressure testing on hydraulic hoses to assess their durability, safety, and reliability under extreme pressure conditions. Utilizing a Haskell's High-Pressure Pump, the machine can generate pressures up to 2500 bar (approximately 36,250 psi) to simulate real-world operational stresses. It is capable of conducting leak testing, elongation tests, and burst tests with precise measurement and monitoring. After each test, a detailed report is automatically generated for quality assurance and compliance purposes.

A Burst Test Machine 3000 Bar is a specialized piece of equipment used primarily for testing the strength and durability of materials, components, or systems under extremely high pressure conditions. The term "3000 Bar" refers to the maximum pressure the machine can generate during testing. For context, 1 bar is approximately equal to the atmospheric pressure at sea level, so 3000 Bar is roughly 3000 times atmospheric pressure or 43,500 psi (pounds per square inch).

The machine is typically used in industries like aerospace, automotive, oil and gas, and manufacturing, where components must endure high-pressure environments. It is designed to simulate extreme conditions that materials or products may experience in real-world applications, and to assess their ability to withstand pressure before failure or rupture.



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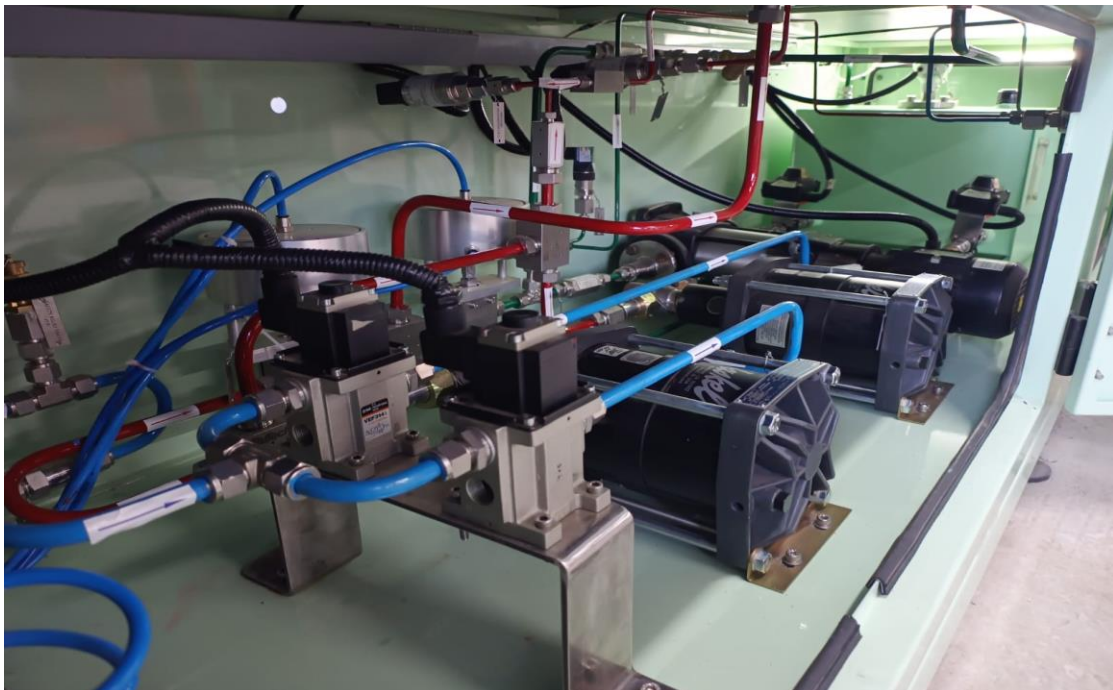
## Specification

### Technical Details:

- **Maximum Test Pressure:** Up to **2500 bar** (36,250 PSI)
- **Pressure Generation System:** Using air actuated **Haskell's High-Pressure Pump**, capable of generating ultra-high pressure with high reliability.
- **Test Modes:**
  - **Leak Test:** Detects any leakage from the hydraulic hose under pressure.

The displayed image shows the software interface for **Leak Testing**, featuring a **Pressure vs. Time graph**. During the test, if any leakage is detected, the graph will show a downward slope in pressure. The system is programmed to capture this drop, and within a predefined time frame and final drop value will show on screen.

- **Elongation Test:** Measures the elongation of hose under pressure.
- **Burst Test:** Assesses the hose's ultimate pressure tolerance before failure.



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- The given image shows the **Burst Test** software interface, displaying a **Pressure vs. Time graph**. During the test, the pressure steadily increases until a sudden drop is detected, indicating the hose has burst. This abrupt pressure drop is captured in real-time, providing an immediate visual indication of the burst event and final pressure value shows on display screen at which pressure hose got burst.
- **Laser Light:** Used for detecting hose precise measurements of elongation.
- **Automation:** Fully automatic test cycles with minimal manual intervention required.
- **Data Logging:** Automatic generation of detailed test reports, including pressure data, burst/elongation values, and time-stamped records for each test.
- **Safety Features:**
  - **Pressure Relief Valves** to prevent over-pressurization.
  - **Automatic Shut-off Mechanism** in case of equipment malfunction or extreme pressure levels.
  - **Bullet proof glass** see the hose condition inside the test chamber
- **Emergency Stop Button** to immediately halt operations in the event of a malfunction, ensuring operator safety and preventing equipment damage.
- **Control System:** Integrated digital control panel with touch-screen interface for easy setup and operation.
- **Calibration:** Precision calibration tools for ensuring accurate pressure measurements.

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## Applications

The **Hydraulic Hose Burst Test Machine** is ideal for testing the integrity, safety, and reliability of hydraulic hoses used in various high-pressure applications. Typical uses include:

- **Hydraulic Industry:** For testing hoses used in industrial hydraulic systems, construction machinery, and oil & gas equipment.
- **Automotive Industry:** Used to test hydraulic lines in vehicles, including heavy-duty trucks, cranes, and mining equipment.
- **Aerospace:** For testing hydraulic hoses in aerospace systems, ensuring safe and reliable operation under extreme conditions.
- **Marine:** Ensures the integrity of hydraulic hoses used in marine vessels and offshore platforms.
- **Defense and Military:** Critical for testing hoses used in military vehicles, aircraft, and naval ships where high-pressure hydraulic systems are involved.
- **Manufacturing and OEMs:** For hose manufacturers to ensure that their products meet safety standards and performance requirements before they are shipped to clients.



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