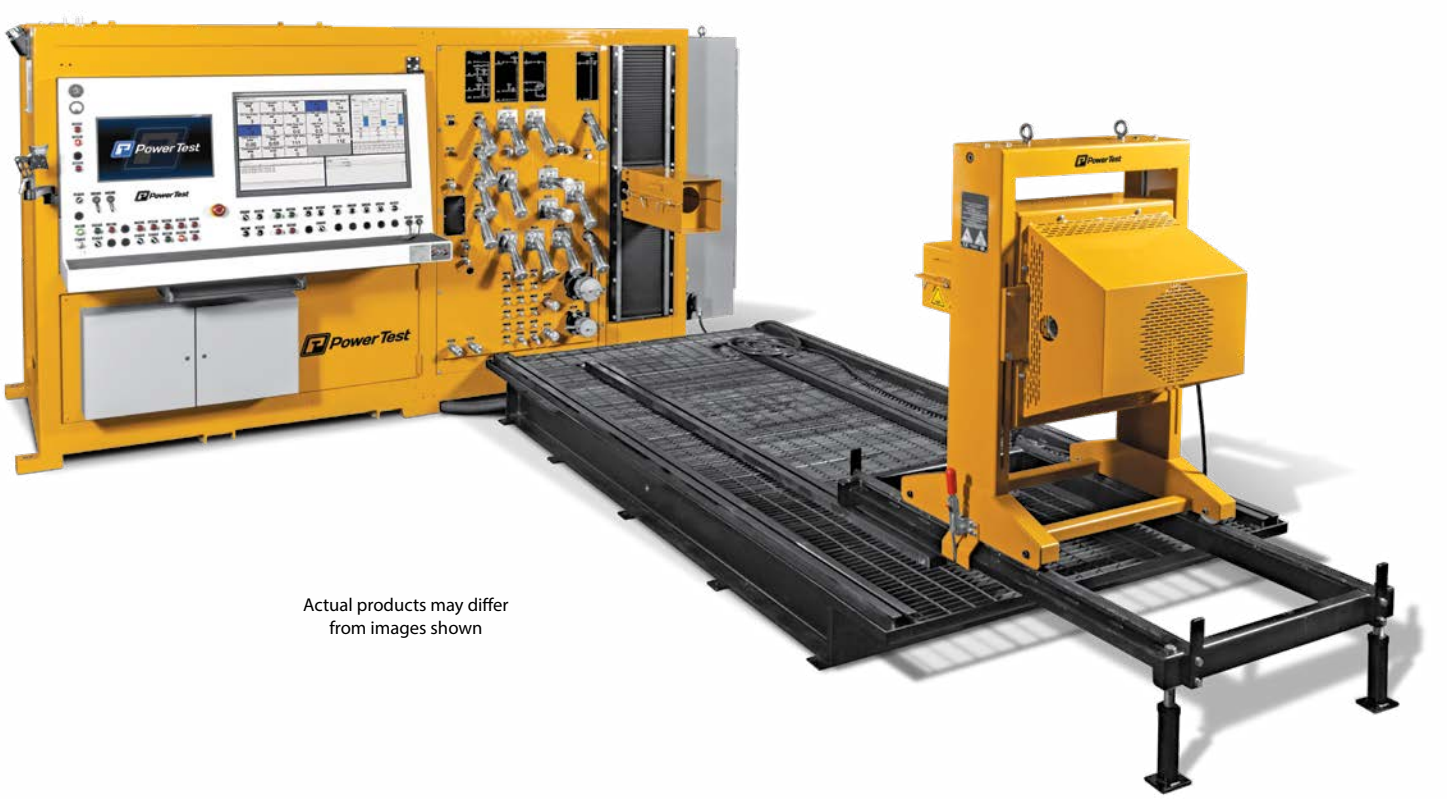
900C-FA
Hydraulic Test Center



Actual products may differ
from images shown

A versatile test stand designed for testing heavy-duty off-highway hydraulic components, the 900C-FA Hydraulic Test Center features some of the most advanced technology on the market today. Designed for complete pump, motor, and hydrostatic transmission and hydraulic testing, with fully automated processes and state of the art display panels, the 900C-FA is much more than a standard transmission and hydraulic test bench.

The 900C-FA provides a durable and reliable platform for performance testing transmissions, torque converters, gear pumps, vane pumps, hydrostatic pumps, hydraulic motors, cylinders, and valves. Performance testing leads to reduced operating costs due to rebuild errors and the possibility of critical failures in the field. Equipment dealers can realize more profitable maintenance contracts and increased customer satisfaction by utilizing performance testing. Additionally, the 900C-FA features an independent closed loop hydrostatic drive for a contamination free drive system, two high resolution display monitors for easy readability and personalization, and industrial grade glycerin filled pressure gauges.

Capable of detecting shift points and mechanical binding, identifying vibrations, diagnosing and locating leaks, measuring pressure and flow, clutch leakage and output torque (optional), the 900C-FA Hydraulic Test Center is one of the most comprehensive hydraulic testing tools on the market.

Features and Benefits

Every 900C-FA Hydraulic Test Center is custom built to your specifications. Our in-house manufacturing allows for short lead times, allowing you to begin testing as soon as possible

- 300/400/450 hp electric motor upgrades available
- On-site Training and Commissioning
- Independent closed loop hydrostatic drive eliminates contamination risk
- Power Lift Assembly:
  - » Facilitates easy maneuvering of the hydraulic drive motor/ drive shaft for alignment with the test component
- Fully Automated Functionality:
  - » Ensures consistent and repeatable results between multiple operators
  - » Specified settings save time with each component test - one and done approach
  - » Capable of controlling every set point of every flow loop
  - » Also allows for full manual control on panel
- Mounted Flat Panel Monitors
  - » Enhanced large display visibility with easy to read dashboards
  - » Utilize OEM communication tools on secondary screen
  - » Reduced panel complexity by displaying only relevant measurements
  - » Convenient keyboard and mouse location directly below display panels

Optional Features

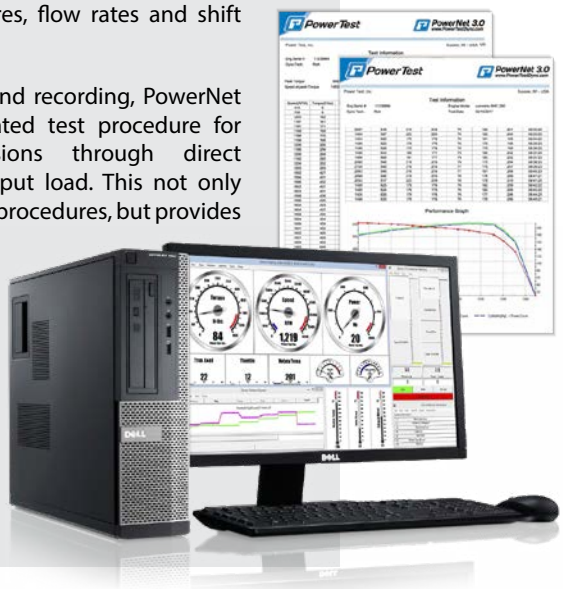
- Adapters available for most Caterpillar off-highway equipment
- Rectifier Manifold allows for testing of closed circuit pumps
- Recessed no-step work table design available
- Output Load, Eddy Current Absorber and stand:
  - » Trolley mounted - capable of vertical and horizontal movement
  - » Continuous torque - 525 lb-ft (711.80 Nm)
  - » Intermittent torque - 1,470 lb-ft (1993.05 Nm)
- Remote Operator Station Kit allows operator to work in an independently controlled environment
- Soft Start Contactor:
  - » Aids in reducing peak current draw during motor start cycle
  - » Reduces voltage drop (“brown out”) during initial start
  - » Works with 380, 400, 415, 480 VAC input requirements (575 VAC system available)
- Dual Centrifugal Oil Cleaning Circuit with 8.0 gpm pump provides optimum oil cleansing through a kidney loop system
- PowerNet TD data acquisition and control offers full control and data acquisition for complete pump, motor, and hydrostatic transmission testing
- Polycarbonate Sliding Safety Shield - Used to protect operator from fluid splash and small projectiles
- Multi-location ladder for convenient machine-top access and maximum safety
- Remote / secondary monitor mount

PowerNet TD Data Acquisition & Control System

PowerNet TD is designed to provide a comprehensive, easy to use data acquisition and control system. PowerNet TD utilizes a Windows-based computerized data acquisition system to monitor and record speeds, torque, pressures, temperatures, flow rates and shift events.

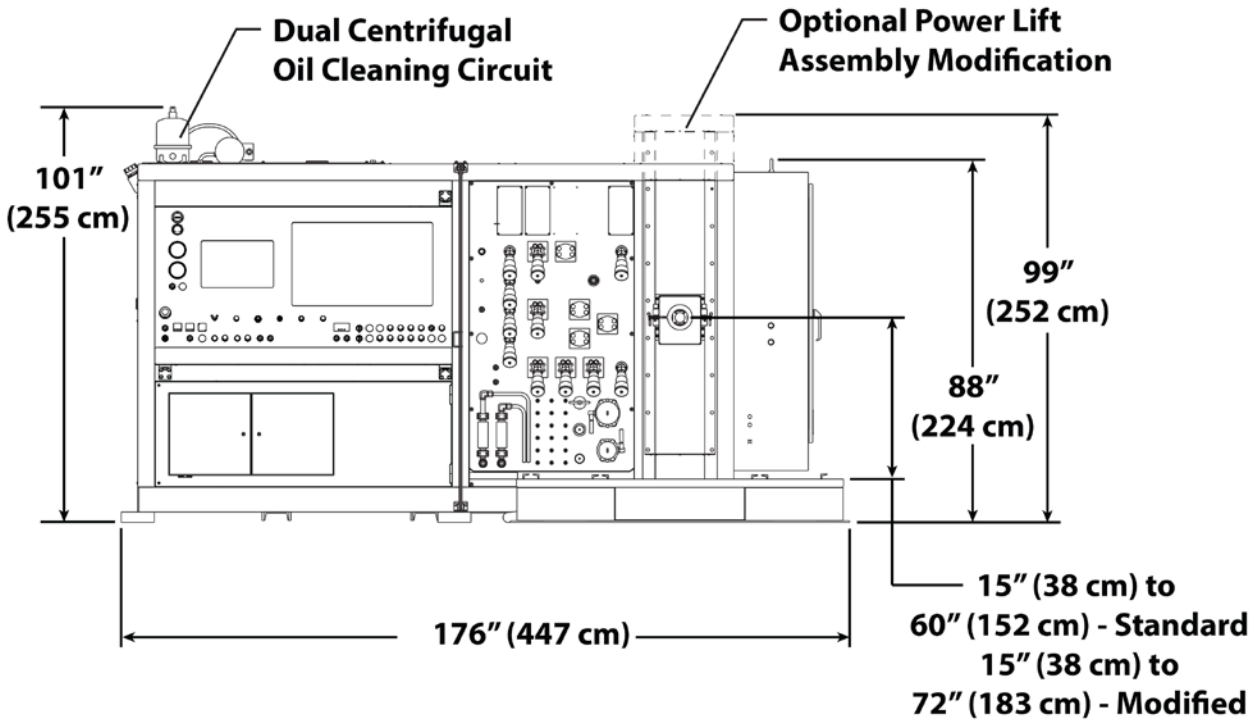
In addition to advanced monitoring and recording, PowerNet TD enables users to run an automated test procedure for electronically controlled transmissions through direct manipulation of speed, flow and output load. This not only ensures consistent repeatability of test procedures, but provides a record of performance parameters exhibited during a test.

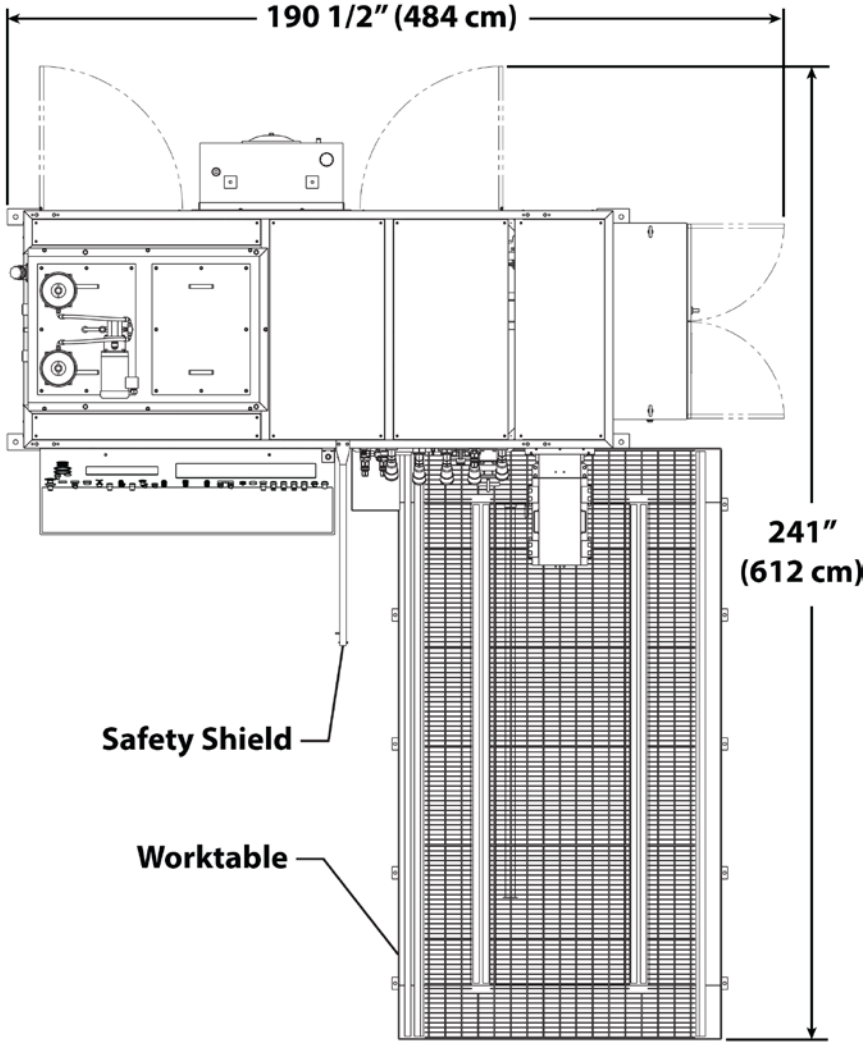
Designed for ease of use, PowerNet TD allows for easy configuration of instrumentation, operator designated warnings for high/low limit and operator customized full-feature data reports. All reports are generated in a standardized Portable Document Format (PDF).



Safety and Maintenance Features

- Automated shutdown protocols with computer controlled pressure reliefs
- Safety set points remain active in both auto and manual operation modes
- Enables remote operation and optimizes employee safety
- Rear door access and ample interior lighting for added visibility and safety during maintenance
- Roof access to filters for easy maintenance
- Easy-swing filter change design


Dual Centrifugal
Oil Cleaning Circuit
Optional Power Lift
Assembly Modification
101"
(255 cm)
99"
(252 cm)
88"
(224 cm)
15" (38 cm) to
60" (152 cm) - Standard
15" (38 cm) to
72" (183 cm) - Modified
176" (447 cm)


190 1/2" (484 cm)
241"
(612 cm)
Safety Shield
Worktable

Capabilities

Electric:

(Available Option) - Test centers utilize a soft-start starting method to reduced motor startup voltage drop

- 900C-300:
  - » 300 hp (223 kW): 460V/60 Hz - 500 amps
  - » 250 hp (187 kW): 380V/50 Hz - 500 amps
- 900C-400:
  - » 400 hp (298 kW): 460V/60 Hz - 600 amps
  - » 330 hp (246 kW): 380V/50 Hz - 600 amps
- 900C-450:
  - » 450 hp (335 kW): 460V/60 Hz - 700 amps
  - » 370 hp (276 kW): 380V/50 Hz - 700 amps

Hydrostatic Drive System:

- Direction: CCW and CW
- Max Speed: 3,200 rpm
- Max Torque: 1,232 lb-ft (1,670 Nm)
- Max Torque Speed Range:
  - » 900C-300: 0-1,270 rpm
  - » 900C-400 / 900C-450: 0-1,760 rpm
- Max Pressure: 6,090 psi (41,989 kPa)
- Pump Displacement:
  - » 900C-300: 180cc
  - » 900C-400 / 900C-450: 250cc
- Motor Displacement: 250cc

Diagnostic Flow Loops:

- Loadable:
  - » 200 gpm: 0-200 gpm (0-757 lpm, 500-6,500 psi (44,816 kPa) flow loop with manual load valve and 10,000 psi (68,948 kPa) gauge for monitoring pressure
  - » 100 gpm: 0-100 gpm (0-378 lpm), 500-6,500 psi (44,816 kPa) flow loop with manual load valve and two (2) 10,000 psi (68,948 kPa) gauges for monitoring pressure. Loop also includes a 500 psi (3,447 kPa) differential gauge to monitor margin pressure
- Non-Loadable:
  - » 100 gpm: 0-100 gpm (0-379 lpm), 500-6,500 psi (44,816 kPa) flow loop and a 10,000 psi (68,948 kPa) gauge for monitoring pressure
  - » Low Flow: 0.5-5.0 gpm (2-19 lpm) flow loop with electronic flow meter - *Optional:* (0.2-2.0 gpm (0.76-8 lpm) flow loop

Hydraulic Fluid Supply Circuits:

- AUX **460V/60HZ:** 0-84 gpm (318 lpm)
  380V/50HZ : 0-69 gpm (261 lpm)
  450-6,090 psi (41,989 kPa) pressurized oil supply circuit with flow control valve, panel meter and 7,500 psi (51,710 kPa) gauge for monitoring pressure
- Supercharge: **460V/60HZ:** 0-31 gpm (117 lpm)
  380V/50HZ: 0-25 gpm (94 lpm)
  180-800 psi (5,516 kPa) pressurized oil supply circuit with 1,000 psi (6,895 kPa) gauge for monitoring pressure. Optional flow control kit available for circuit
- High psi: **460V/60HZ:** 0-3.6 gpm (13 lpm)
  380V/50HZ: 0-3 gpm (11 lpm)
  0-7,200 psi (49,642 kPa) pressurized oil supply circuit with 10,000 psi (68,948 kPa) gauge for monitoring pressure
- Pilot: **460V/60HZ:** High psi pump provides pressurized oil supply for this 0-3.6 gpm (13 lpm)
  380V/50HZ: High psi pump provides pressurized oil supply for this 0-3 gpm (11 lpm)
  0-800 psi (5,516 kPa) circuit with 1,000 psi (6,895 kPa) gauge for monitoring pressure
- Lube: **460V/60HZ:** High psi pump provides pressurized oil supply for this 0-8 gpm (30 lpm)
  380V/50HZ: High psi pump provides pressurized oil supply for this 0-6 gpm (22 lpm)
  0-65 psi (448 kPa) circuit with 200 psi (1,379 kPa) gauge for monitoring pressure