

Actual products may differ
from images shown

The 550E Test Stand is designed to test a wide variety of on-highway and off-highway, medium and heavy duty transmissions and torque converters. The machine accommodates mechanical and hydrostatic transmission testing with the ability to mount all standard drop-box or offset, engine, mid-ship and remote mounted powertrain systems.

Based on the 450E Transmission Test Stand, the 550E provides larger transmission mounting ability, expanded testing capabilities with integrated hydraulic oil supply and diagnostic flow loops for control of torque converter and transmission. The 550E test stand utilizes the most advanced variable speed motor/drive control technologies to provide exceptional AC motor performance for input speed and torque control. While many test procedures are un-loaded, when required output load is accommodated with an optional air-cooled eddy current load unit.

This progressively engineered, quiet, compact system keeps vehicle downtime to a minimum by greatly reducing critical failures found in testing prior to installation in the vehicle. Performance testing on the 550E will eliminate the added costs of disassembly and repair for rebuilt or serviced components.

Our equipment is used around the world in manufacturing and remanufacturing facilities, service centers and at many global military depots. The 550E design gives a high degree of flexibility to test a wide variety of transmissions.

Features

- Designed to test engine, remote and mid-ship mounted transmissions as well as torque converters
- Accommodates drop-box output configurations
- Quiet variable speed electric motor driven design aids in troubleshooting the transmission
- Driveshaft connection to input and output eliminates the need for precise alignment of transmission and minimizes vibration
- Optional Eddy Load Unit allows ability to apply precise controlled output load to confirm functions, monitor noise issues and simulate actual operational conditions
- Eddy Load Unit accommodates vertical and horizontal offsets
- Dynamic Load Sensing (DLS) controls peak input torque as needed allowing prime mover speed to decrease during up shifting
- Integrated hydraulic supply pump and oil reservoir with preheat, turbine flow measurement and filtration
- Three additional non-loadable diagnostic flow loops
- Pressure transducers with easy access ports for shift pressure data
- Integral drain sump with pump and filter to recirculate test oil
- Requires input power of 380 - 460 VAC, 3 PH 50 or 60 Hz
- Adapter kits available for all major transmission makes and models
- Provides printed reports (customized with your company logo) of the test results, including shift patterns

Optional Electronic Shift Consoles

The optional consoles are designed for either factory authorized service centers with the ability to flash Transmission Control Units (TCUs) or non-dealer service centers that require the ability to exercise multiple brands and models of transmissions. Both provide a convenient storage and work surface for PowerNet TD data acquisition system.

• ASC Shift Cart

- » Primarily used by non-dealer service centers.
- » Easily switches between different shift profiles using the touchscreen computer.
- » Eliminates the expense and need for multiple TCUs. Does not require an OEM TCU for reprogramming.

• ESC Shift Cart

- » Primarily used by factory authorized service centers with ability to flash TCUs.
- » OEM software, such as Allison DOC (not included), can connect directly to the console to perform diagnostics, read and reset trouble codes and reflash the TCU.
- » Oversized enclosure can house multiple TCUs

Additional Optional Equipment

- Gauge Panel Package
- Centrifugal Oil Cleaning
- Input Torque Measurement
- Motorized Vertical Load Unit Adjustment
- Eddy Load Unit
- Air Brake Stall Kit
- Load Offset Kit

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. 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).

Specifications

Electric Motor:

- 550E-150
 - » 150 hp (112 kW): 460 VAC / 60 Hz - 300 amps
 - » 125 hp (93 kW): 380 VAC / 50 Hz - 300 amps
- 550E-200:
 - » 200 hp (147 kW) 460 VAC / 60 Hz - 350 amps
 - » 165 hp (125 kW) 380 VAC / 50 Hz - 350 amps
- 550E-300:
 - » 300 hp (224 kW) 460 VAC / 60 Hz - 450 amps
 - » 250 hp (185 kW) 380 VAC / 50 Hz - 450 amps

Inverter Duty: 460 VAC / 60 Hz, 380 VAC / 50 Hz 3-Phase

Max. Transmission Input Torque (continuous):

- 450E-150: 442 lb-ft (610 Nm) up to 1,785 rpm
- 450E-200: 588 lb-ft (811 Nm) up to 1,785 rpm
- 450E-300: 883 lb-ft (1,216 Nm) up to 1,785 rpm

Max. Transmission Input Speed:

- 3,600 rpm (bi-directional)

Converter Flow Monitoring Circuit:

- (1) One - 5 - 100 gpm (18 - 379 lpm) flow meter with digital display
- Flow circuit includes 22 Micron filter
- Manual control for differential pressure adjust (backpressure)
- Heat exchanger with digital temperature controller

Pressure Taps:

- (10) Ten - pressure taps to monitor pressures of component under test:
 - » (8) Eight - 600 PSI (4,137 kPa)
 - » (2) Two - 100 PSI (689 kPa)

Diagnostic Flow Loops (Non-Loadable):

- (3) Three - 5 - 100 gpm (18 - 379 lpm) flow loops

Main Reservoir:

- Capacity: 130 gal (492 l)
- Includes (2) Two - 6.7 hp (5 kW) immersion heaters with digital temperature control

Worktable Sump:


- Capacity: 60 gallons (378 l)
- Fill Pump Filter Standard


Adapters available for the following transmissions (additional OEMs available):

- Allison
- ZF
- Twin Disc
- Dana/Clark
- Funk

Weight and Dimensions (with worktable):

- Approximately 7,720 lb (3,501 kg)
- (W x H x D): 227 x 77 x 79 in (576 x 195 x 200 cm)



 **Power Test**

Power Test, LLC. is an industry leader in the design, manufacture and sale of dynamometers, heavy equipment testing systems and related data acquisition and control systems. Since 1976, Power Test has provided specialized test equipment to manufacturers, rebuild facilities and distributors in the mining, oil & gas, power generation, marine, trucking, construction, rail and military markets in over 90 countries on six continents. Our headquarters and manufacturing operations are located in Sussex, WI with sales representatives worldwide.