



PTX Engine Dynamometer Systems
www.pwrtst.com



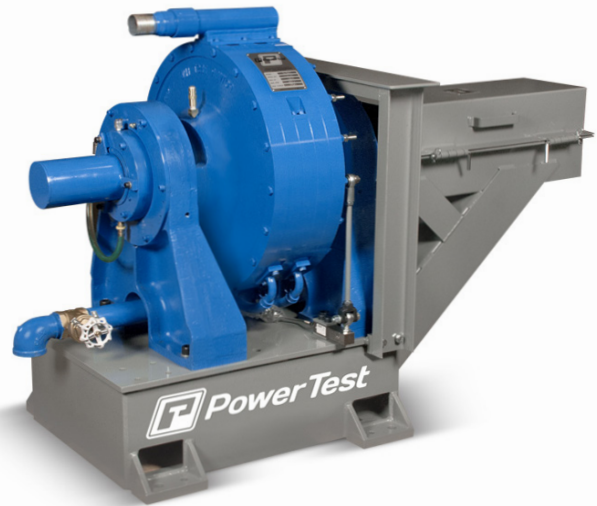
PTX Engine Dynamometer Systems

The PTX engine dynamometer systems contain everything required to perform reliable engine certification testing for on-highway, military and construction applications. Each package delivers you the best overall value on your investment and is ready to go to work. At the heart of each system is a Power Test 50X-Series water brake engine dynamometer, known throughout the industry for long-term proven reliability and exceptional value.

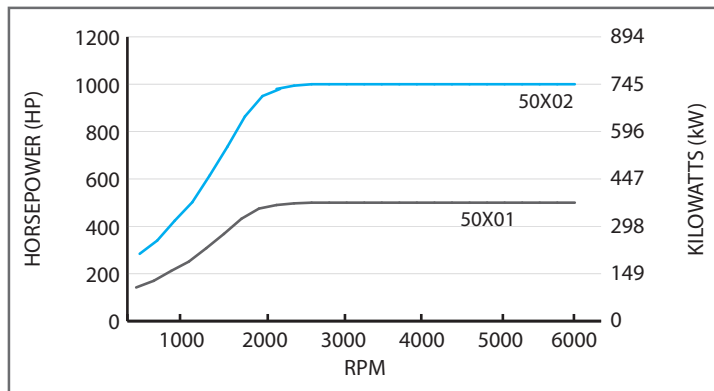
PTX systems are available in both 500 HP (373kW) and 1,000 HP (746kW) configurations. With either 1,750 or 3,500 ft. lbs. of torque capability at 1,300 rpm or 6,000 rpm maximum speed, depending on the model selected. Systems are pre-configured to provide the correct compliment of accessories coupled with the automated simplicity of our PowerNet LT data acquisition and control system.

The 50X-Series dynamometer features a trunnion-mounted, fixed base design. These dynamometers provide equal load capability in either direction of rotation. The simplicity of the Power Test design assures continued operation without relying upon the often problematic seal lubrication lines or thermal overloads used by other manufacturers.

The through shaft design allows either end of the dynamometer to be driven and for dynamometer mounted starting systems to be attached and used. Although supplied to provide long term service, internationally available bearings and seals are used in every X-Series dynamometer and are located in easy-to-access cartridges to allow field service without the need for dynamometer removal or specialty tools.

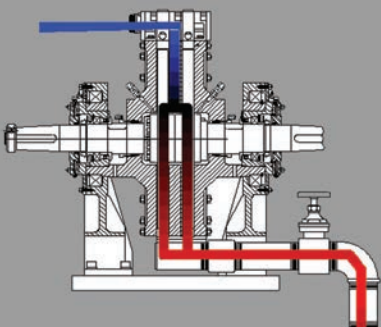


50X02 1,000 HP Dynamometer



50X Series

- For testing electric motors, gasoline, and higher speed diesel applications.
- Power ranges from 50-1000 HP.
- Speeds to 6,000 rpm.
- Alloy construction for reduced inertia.

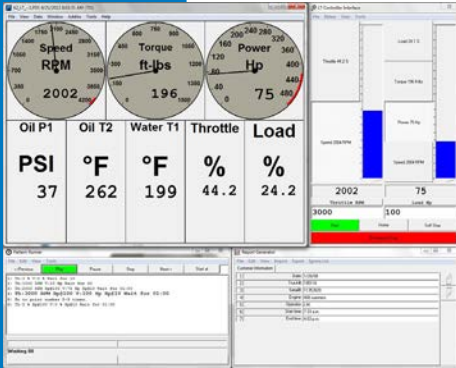


How A Water Brake Dynamometer Works

In the Power Test water brake dynamometer, water flow proportional to desired applied load is used to create resistance to the engine or motor. A controlled flow of water through the inlet manifold is directed at the center of the rotor in each absorption section. This water is then expelled towards the outside of the dynamometer body by centrifugal force. As it is directed outward, the water is accelerated into pockets on the stationary stator plates where it is decelerated. The continual acceleration and deceleration causes the applied load to the input device. Through this transfer of energy, the water is heated and discharged.

PowerNet LT

PowerNet LT is a complete monitoring and control package for dynamometers and engines. Power Test transforms a standard desktop computer and a specifically developed interface box into engine development and qualification tools. Featuring a condensed version of our PowerNet Windows®-based software, manual setpoint and fully automated tests are just a mouse click away.



With PowerNet LT, standard engine tests can be recalled from a file and by clicking on the start button an expert or a beginner can perform a test and achieve the same results. The automation of the engine throttle and the dynamometer load assure that every step of the test is performed correctly.

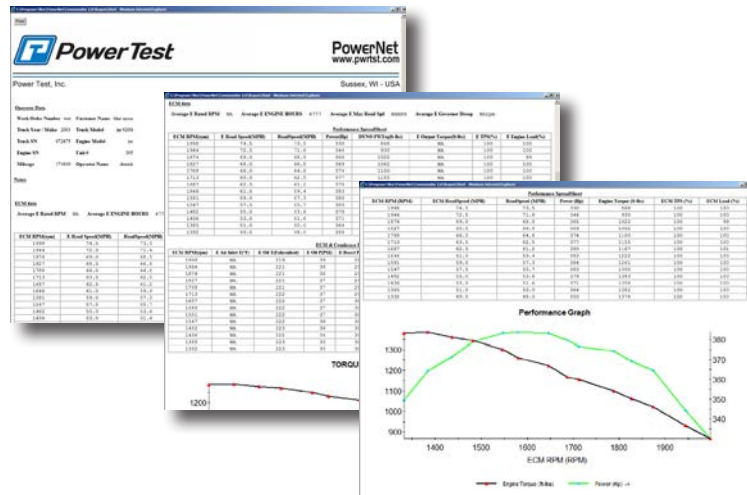
Included with the PowerNet LT package are sensors for engine, oil, fuel, and air temperature, as well as sensors for oil and fuel pressure. All sensors are enclosed in an industrial console and supplied with quick disconnects for rapid connection/disconnection. Information collected from these sensors along with torque, rpm, and power measurements from the dynamometer are all automatically recorded to the computer hard drive.

Through automated recording, verifiable test results are obtained. The PowerNet LT package assures that the data is true and accurate. Reports are easily produced that include your company logo, your specific workshop information, customer information, and the engine manufacturer's specifications, along with the actual dynamometer test results in table and graph formats. The included paragraph feature allows you to enter any notes or observations made during the test.



The included alarm feature provides visual displays and flashing warnings when a sensor exceeds the usual operation range. Whenever an alarm condition is reached, data is automatically recorded so that a determination of the trouble can be diagnosed.

The PowerNet LT software package may be used as supplied or you may easily change the sensor units, ranges, alarm values, and even the language of display if desired! Once changes have been made, they are stored to the system for future usage. Data that is saved to the hard drive may be recalled and printed at any time and may even be sent by e-mail.

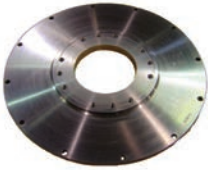


A Complete System for Comprehensive Testing

The PTX dynamometer system is supplied complete with engine mounting, connection and cooling accessories. A universal engine cart capable of supporting and transporting engines of up to 6,000 lbs. running weight is supplied. The engine cart provides a rapid and efficient method of placing the engine in the proper position for testing. Screw jacks and load binders are a thing of the past.



Adapter plates are provided for quickly mounting the rear of the engine to the cart and an adjustable support allows the front of the engine to rest upon it. Once rolled into the test cell, the cart is easily guided into position and simply pinned to keep it from rolling away. With these easy steps completed, the engine is ready to go.



With the engine in position, the flywheel is connected to a guarded universal joint drive shaft with just a few bolts. Through the use of the drive shaft and the guided positioning of the engine on the cart, time spent connecting the engine is minimal.

Once in position and connected, the engine cooling column may be used to maintain jacket water temperatures on liquid cooled engines. The Power Test engine cooling column provides thermostatic control of the jacket water temperature to ensure that your engines do not overheat.

PTX01 Dynamometer System

50X01 500 HP Dynamometer and Sub Base
PowerNet LT Data Acquisition System
Drive Shaft and Drive Shaft Guard
Universal Engine Cart
Cooling Column
Choice of 2 Flywheel Adapter Plates

PTX02 Dynamometer System

50X02 1,000 HP Dynamometer and Sub Base
PowerNet LT Data Acquisition System
Drive Shaft and Drive Shaft Guard
Universal Engine Cart
Cooling Column
Choice of 2 Flywheel Adapter Plates

In addition to the components supplied with a standard PTX dynamometer system, Power Test manufactures a variety of accessories designed specifically to meet your engine testing needs, including:

Crankshaft Adapter Plates



Air Starters



Engine Mounted Dampeners



Charge Air Coolers



Power Test, Your Full Service Dynamometer Manufacturer

Power Test can provide facility design and installation of every dynamometer we sell. We also offer a complete line of support equipment, including ventilation systems, exhaust systems, auxiliary cooling systems, and water recirculation systems.

Contact your Power Test representative or visit our web site at www.pwrtst.com for more information.

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