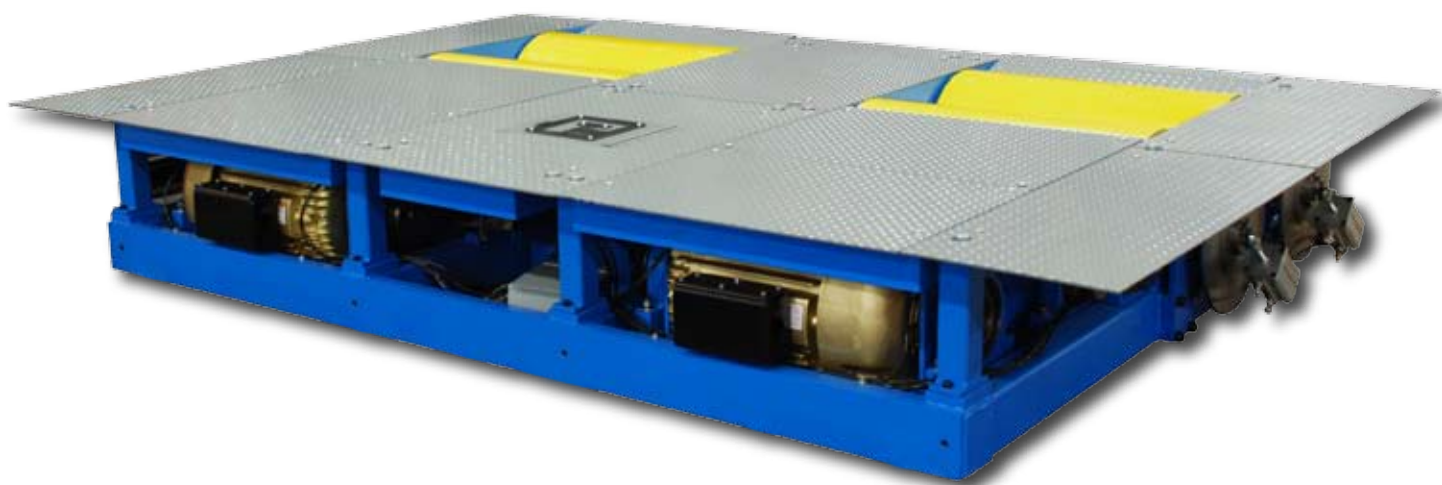


MOTORIZED CHASSIS DYNAMOMETERS

US PATENT #6,860,145 B2



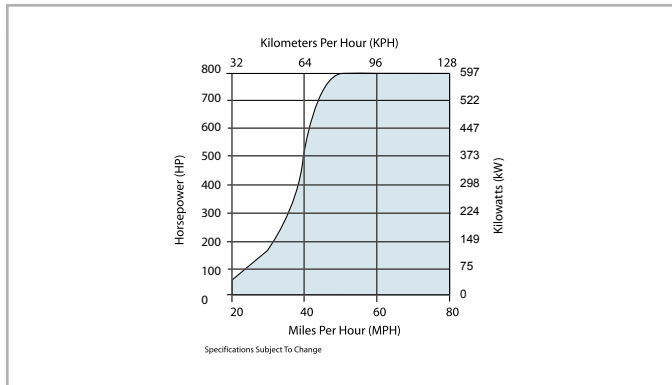
CF21M Single Axle Transit Chassis Dynamometer

MOTORIZED DYNAMOMETERS

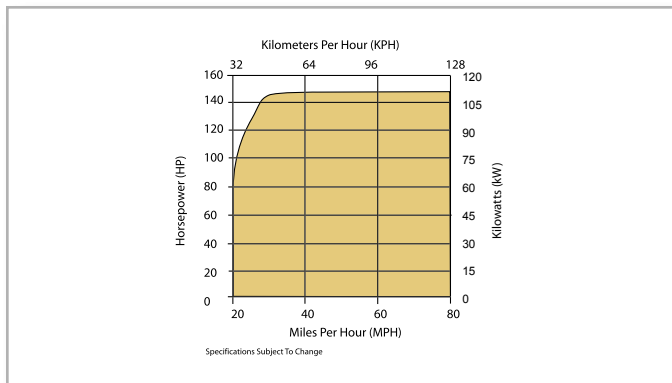
Power Test is proud to present our exclusive motorized chassis dynamometer systems. Featuring large rolls, heavy construction, and state-of-the-art PC-based data acquisition and control, these systems provide the ultimate in reliability. Independent left and right load absorption and roller motoring allows one machine to perform repeatable engine, transmission, drivetrain, brake testing, and alignment verification. When interfaced with the diagnostic connection of electronic engine equipped vehicles, full-featured engine data and dynamometer test results are combined into an easy-to-read and easy-to-understand report.

Motorized Chassis Dynamometer Construction

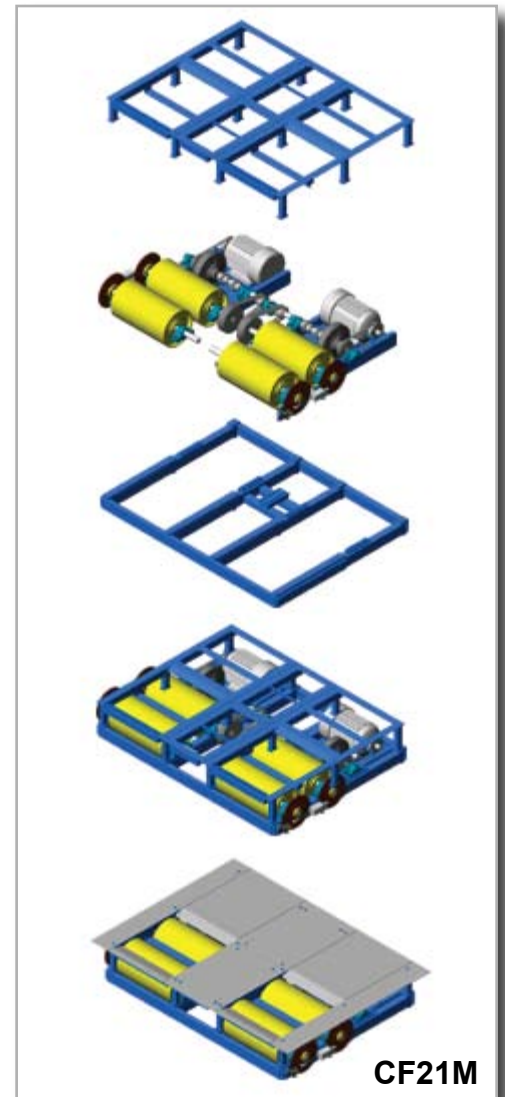
- Our patented independent wheel power absorption and motoring allows complete vehicle testing to be performed
- Multiple machines may be installed for simultaneous testing of multiple axles
- Dynamically balanced 20" diameter roll set provides increased traction and minimizes tire heat during extended tests
- Large disc brakes and cradle roll design for easy vehicle positioning
- No gearboxes, differentials, or drive shafts resulting in improved durability and fewer service issues
- Rigid, precision ground, structural steel frame construction with removable frame members allows easy access for servicing
- Greased pillow block bearings accommodate for servicing without major disassembly and re-alignment



Absorption Curve



Motoring Power Curve



Performance	Single Axle Motoring Chassis Dyno	
Max. Axle Weight Capacity	32,000 lbs.	14,515 kg
Max. Vehicle Speed	80 mph	128 kph
Max. Power Absorption	800 HP	596kW
Max. Motorized Power	150 HP @ 30-80 mph	111kW @ 48-128 kph
Est. Net Weight	10,000 lbs.	4,535 kg

*specifications subject to change

PowerNet CD - The Future of In-Frame Testing

The PowerNet CD data acquisition and control system is designed to take chassis dynamometer testing to the next level. PowerNet CD utilizes a networked computer system to provide automated, repeatable vehicle tests - all controlled from a wireless hand held device operated from the driver's seat! With the PowerNet CD data acquisition and control system, vehicle and work order information can be entered, then the desired tests can be recalled and run. For diagnostic purposes, service tools may also be connected to perform cylinder cutouts, reset cruise limits, and perform other engine specific tests.



Standard ECM Interface

When connected to the system, electronically controlled engines can transmit valuable engine data, which is automatically merged with dynamometer information to be viewed, stored, reported, and graphed. All of this information can be viewed from the wireless hand held controller.

The Wireless Hand Held Controller

Power Test's wireless hand held controller provides the ultimate in behind the wheel instrumentation and control. A state-of-the-art touch-screen and interface device, the wireless hand held controller is all that is needed to control the dynamometer.



From behind the wheel, the operator selects a test pattern to be run, engages the throttle, and literally watches the vehicle automatically run through the steps of a repeatable test.

Flexible Testing Modes

Setpoint Operation allows the operator to enter a specific value for speed or horsepower on the hand held controller. The dynamometer load is automatically adjusted and maintained until the next value is entered. You can then choose to increase or decrease these values incrementally or by entering the next numeric value.

Pattern Run Mode Operation allows the operator to run a desired test cycle created with PowerNet. From the hand held controller, the operator can begin these tests with the touch of a button. Created on the Commander PC by selecting setpoints, the mode of operation, and entering the length of time each point is run, a pattern is constructed and it can easily be recalled and run from the hand held controller.

Manual Operation allows the operator to have complete control over the chassis dynamometer's applied load. The operator decides how much horsepower or speed should be reached by the engine and the duration of each test.

The PowerNet Controller

The PowerNet Controller features an industrial distributed I/O system, featuring modular digital, analog, and special function I/O devices. The Controller is reliable - even in harsh environmental conditions.

The Controller is interfaced with the Commander PC through a LAN connection. This helps to ensure that the technology we offer is easily serviced, updated, and maintained. Most of the components used in our system may be purchased "off the shelf" from a variety of sources throughout the world.



Detailed Information Reporting with PowerNet CD

PowerNet CD provides colorful screen captures, easy-to-read performance reports, and graphical charts. Now results obtained during a vehicle test, combined with vehicle specific information, can be confidently presented as a final confirmation of quality assurance - all with just a few clicks of the mouse.



The Future of Heavy Duty Vehicle Testing...Only From Power Test

Power Test's exclusive motorized chassis dynamometers take the place of several machines previously required to perform the very same tests. Our systems can perform more tests using less floor space and in less time than ever before.

Absorbing Mode

- Transmission Up Shift
- Flywheel Torque
- Speedometer Tests
- Transmission Down Shift
- Vibration Tests
- Cooling System Performance
- Wheel Horsepower
- Noise Tests
- Fuel Efficiency Tests

Motoring Mode

Steer Axle

- Rolling Resistance/Balance
- Brake Force/Balance
- Brake Fade
- Brake Conditioning
- Tire Vibration
- Speedometer Tests
- Alignment Verification

Non-Powered Axle

- Rolling Resistance/Balance
- Brake Force/Balance
- Brake Fade
- Brake Conditioning
- Tire Vibration
- Speedometer Tests
- Alignment Verification

Drive Axle

- Rolling Resistance/Balance
- Brake Force/Balance
- Brake Fade
- Brake Conditioning
- Tire Vibration
- Speedometer Tests
- Drive Train Parasitic Loss
- Brake Saver/Retarder

The New Standard For Brake Bias Testing

Completely independent motoring units allow our motorized chassis dynamometers to measure, in terms of horsepower and torque, brake bias and parasitic drag at each wheel. Additionally, intelligent motor controls provide for precise brake testing at virtually any speed.

PowerNet for the Motorized Chassis Dynamometer

The PowerNet data acquisition and control system is specifically produced for our patented motorized chassis dynamometers. PowerNet utilizes a networked computer system to provide automated, repeatable vehicle tests - all controlled from a touch-screen device operated from the driver's seat. During a test, the operator is prompted with simple, step-by-step instructions and the computer does all the work. When connected to the PowerNet system, vehicles equipped with electronic engines can transmit valuable engine data, which is automatically merged with dynamometer information to be viewed, stored, reported, and graphed. This information can be easily viewed from the hand held control.



A Complete Testing Solution

Power Test provides a full range of test bay support equipment and accessories, including exhaust hoods, water recirculation and cooling systems, fuel measurement systems, smoke opacity meters, additional temperature and pressure sensors, and analog input channels. Whether you are dealing with new installation or looking to repair, upgrade, or replace an existing dynamometer, Power Test has a solution.

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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