



DS Series Engine Dynamometers

Engine Dynamometer



Durability

Taylor Dynamometer's water brake style engine dynamometers are known for their longevity. Taylor builds every one of its products with heavy-duty components and then supports each with legendary service. The end result is a track record of proven durability and satisfied customers.

Taylor Dynamometer has been manufacturing waterbrake (hydraulic) style dynamometers since the 1920's. Commonly referred to as hydraulic dynamometers, waterbrake dynamometers are particularly well suited for steady state, step, sweep and moderate to slow transient testing requirements. Waterbrake style engine dynamometers are known to have a low acquisition cost, low inertia, require limited maintenance and provide excellent durability.

Performance

The rotating torque from the prime mover is absorbed by the turbulence (water shear and momentum exchange) of the water within the dynamometer. This braking action or load is developed by a rotor that directs the water against the stator. The stator in turn redirects the water back against the rotor, thereby, opposing the motion of the rotor. The greater the flow of the water through the dynamometer, the greater the braking action or load on the prime mover.

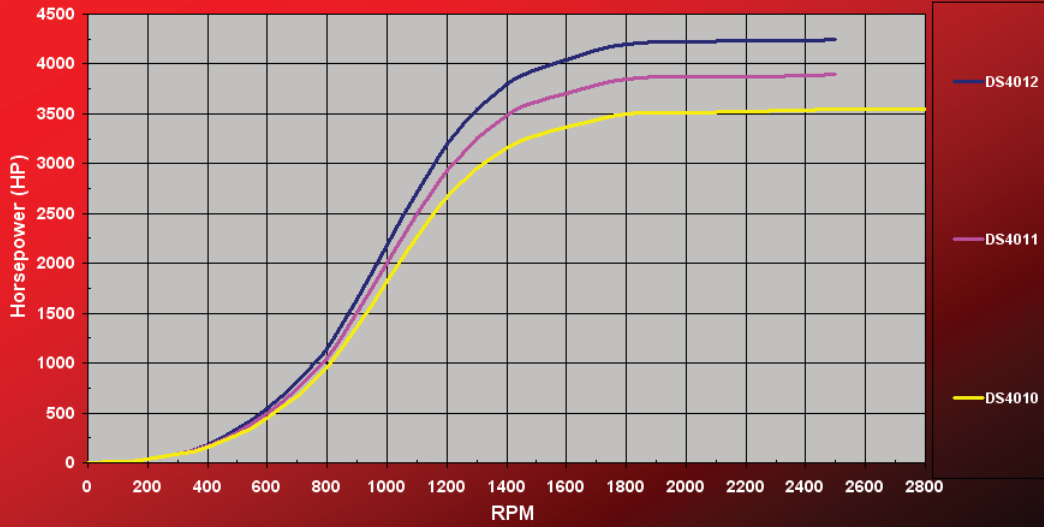
The DS Series of Dynamometers

Our DS series includes 3 different models all sharing the same design and construction. The power absorption capacity across the product line is changed by adding rotors and stators.

Model	Max Speed	Max Power
DS4010	2800	3500
DS4011	2500	3875
DS4012	2500	4250

The DS series of dynamometers can be operated in both directions of rotation.

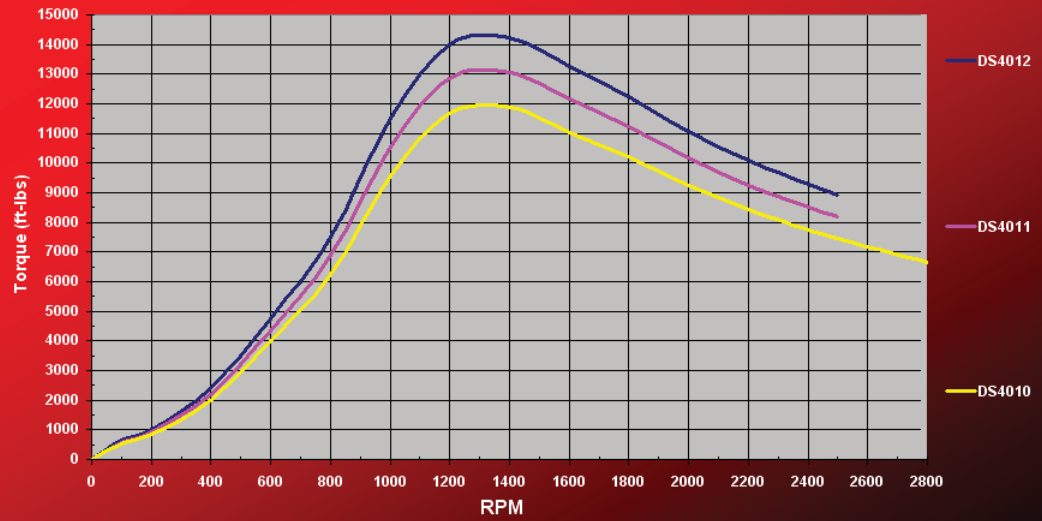
Taylor DS Series Horsepower Curve , English



The DS series accommodates power ranges from as little as 350hp to 4,250hp (261kW to 3,169kW) and can operate at up to 2,500 rpm or 2,800 rpm.

With peak torque of up to 13,675 ft-lbs (18,541 Nm) @ 1,300 rpm.

Taylor DS Series Torque Curve, English



DynPro Data Acquisition & Control System

The making of a truly exceptional dynamometer system requires an exceptional dynamometer data acquisition and control system.



DynPro provides the flexibility and control required in today's challenging test environment, gives the operator complete control of the dynamometer functions and provides comprehensive data acquisition.

DynPro controls and acquires the data from the many accessories that compliment Taylor's DynPro system, including the Smoke Opacity Meter, the Emissions Gas Analyzer, the Pressure and Temperature Package, the Heavy-Duty Electronic Interface (for ECM channels) and the Fuel Measurement Unit.

The screenshot displays the DynPro software interface with several key components:

- Customer Information:** Fields for Name, Address, City/State/Zip, Phone, Mobile Phone, and Dyn Operator.
- Engine Information:** Fields for ID No., Make, and Model.
- Vehicle Information:** Fields for Vehicle Serial Number, Make, Model, and License Plate Number.
- Data Table:** A table with columns for 'Channels', 'Rate', and 'Units'. It lists various parameters like Torque (b-ft), Power (HP), and various pressure and temperature readings.
- Graph:** A line graph showing 'Amplitude' vs 'Time (seconds)'. The Y-axis ranges from 0 to 2500, and the X-axis ranges from 0 to 720. The graph plots Torque (b-ft), Power (HP), Press_Four (psig), Press_Two (psig), Temp_Two (deg F), and Temp_Four (deg F).

DynPro is a PC based system and operates in a Windows™ environment. It encompasses the features of a lab grade control system and still delivers an operator friendly point and click interface.

Accessories

On each of our engine dynamometers, Taylor provides the option of including: driveshafts, torsional couplings, flywheel adapter plate kits, shaft guards, prefab sub-bases and more.

Taylor Dynamometer offers a full compliment of accessories to support your testing requirements.



Ask a Sales Representative for information on accessories such as:

- *Driveshaft
- *Exhaust System
- *Cooling Column
- *Hose Kit
- *Charge Air Cooler
- *Water Recirculation System
- *Air Handling (HVAC) System
- *Modular Sound Proof Test Cell
- *Flywheel Adapter Kit
- *Sub-base
- *Guard
- *Engine Cart

and more....