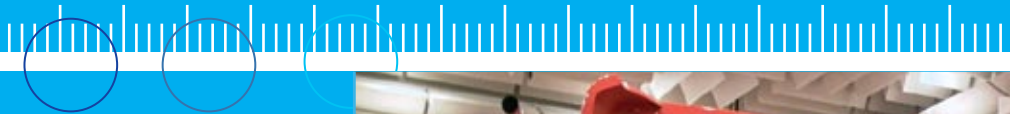



# Advanced Engineering

Testing Solutions

## Noise, Vibration & Harshness Dynamometers

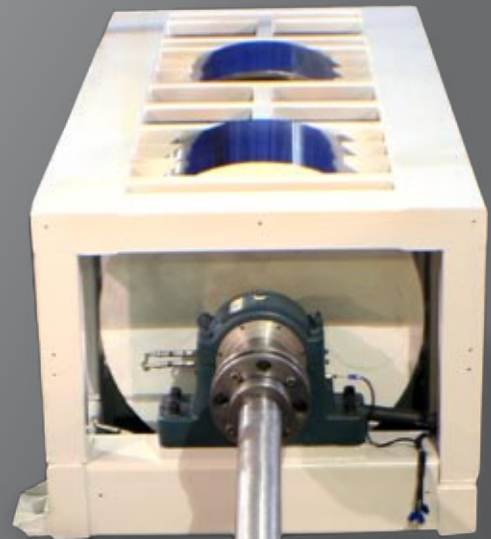


**Smarter** By  
**Design**

 **MAE**™  
**MUSTANG**  
ADVANCED ENGINEERING

# NVH Chassis Dynamometers

The ever-increasing push for vehicle refinement and improved driver comfort levels calls for highly sophisticated and technically advanced NVH Test Systems using chassis dynamometers within semi anechoic chambers. NVH applications have long been a specialty and area of technical expertise for the team of testing and applications engineers of Mustang Advanced Engineering. Whether your application involves interior or exterior NVH challenges, MAE has an equipment and systems solution to meet your needs as well as your budget. MAE offers NVH chassis dynamometers with roll diameters ranging from 30" to 72" and offers direct HUB connection style test beds for applications that require the complete elimination of tire generated NHV. Regardless of the unique challenges of your application, MAE has an economical solution to meet your NVH testing needs.



*Blachford NVH Test Cell*



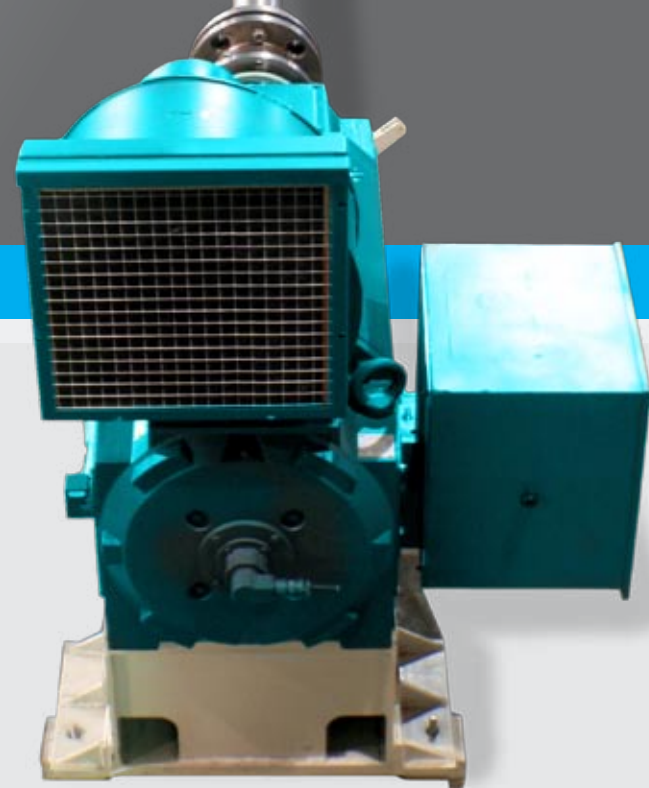
*Polaris NVH Test Cell*



*Chrysler Test Chamber*



*Nissan NHV Test Cell*



## Global Market Leader

MAE offers a wide range of NVH system and designs, from 4x2, 4x4 to a number of multiple axle configurations. Type of loading devices offer include AC, water-cooled eddy current and air-cooled eddy current. MAE has developed and installed systems for applications ranging from small ATV and snowmobiles to large class 8 trucks, military vehicles and even 8x8 "independent roll" commercial vehicles.

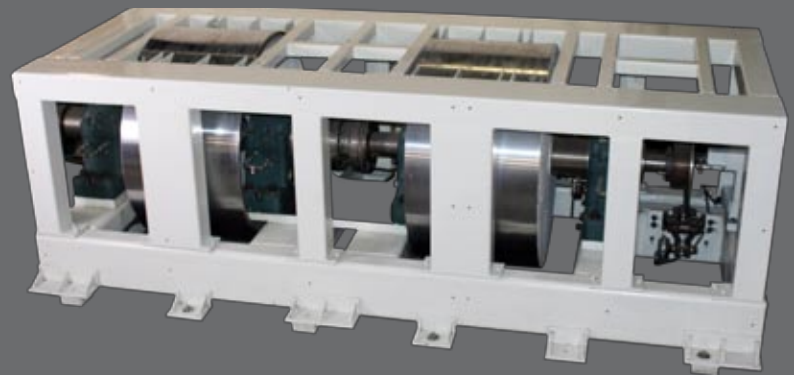
MAE is widely regarded as a leading global provider of chassis dynamometer systems for a wide range of application that require accurate and repeatable road load simulation, speed control, force control or acceleration control. Mustang's line-up of ultra-low noise NVH chassis dynamometer systems have evolved and acquired techniques and capabilities previously only demanded in "high accuracy" emission test systems.

### **The latest NVH systems developed by MAE utilize AC Motors and provide significant benefits including:**

- Highly responsive inertia simulation capability
- Accurate and responsive roll speed synchronization
- Independent wheel control
- Emission standard road simulation accuracy
- Phase lock (relative position control) of the rolls
- "Acoustically dead" roll design and construction

### **Additional Options and Services**

- Throttle actuator or robot driver
- Complete facilities planning and installation services
- Vibration analysis
- Enhanced data acquisition packages



### **Roll Design**

- Roll surface finish conducive to noise abatement
- Inner roll coating of a water based visco-elastic compound that reduces the structure-borne vibration.
- Roll end cap flash with roll face

### **Vibration Isolation**

- Chassis dynamometer floor plating isolated with a elastomeric isolator which isolated noise, shock, and high frequency vibration
- Pit walls insulated with sound absorbing sheeting
- Chassis dynamometer frame isolated from pit with vibration isolation tri-wedge machinery mount

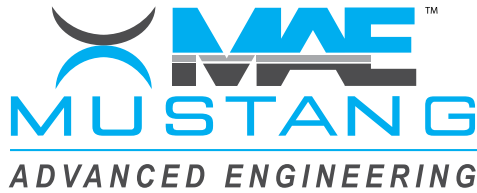
### **Bearings**

- Hydrostatic bearings and special lube system

### **Sound Barriers**

- Sound barrier encasing motor
- Sound barrier encasing rolls
- Motor drives and fan system in isolated location





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## About MAE

Mustang Advanced Engineering is a leading provider of comprehensive testing solutions for the development and testing of engines, powertrain systems and complete vehicles. Founded in 1975, Mustang has long been a trusted source of expertise in measurement and testing technologies for the global industrial market. World-class product offerings, custom design support and technical assistance, backed by a dedicated factory service team, has positioned MAE among the global leaders in providing advanced testing solutions.

As a global leader in the design, manufacturing, and integration of advanced testing and measurement systems, MAE has delivered and continually supports literally thousands of test systems to virtually every corner of the globe.

Our mission is to achieve the highest possible level of customer satisfaction by providing innovative technical solutions and product designs and by striving to achieve perfection in product quality, delivery and service. At MAE, our customers are our highest priority - we do everything in our power to satisfy our customers. Our entire organization understands that the customer comes first and nothing else is more important.

To learn more about how MAE can help solve your most demanding testing challenges contact one of our sales engineers or visit [www.mustangae.com](http://www.mustangae.com).

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