



# GIANT 6x00 SERIES

Multi-Purpose Brake Dynamometers



EMISSIONS



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**HORIBA**  
Automotive





# GIANT 6x00 SERIES

## Multi-Purpose Brake Dynamometers

GIANT 6x00 is a series of full-sized, multi-purpose inertia brake dynamometers. They are designed for performance and NVH brake system tests, ranging from passenger vehicles to truck brakes, commercial vehicle assemblies and high-speed railway applications. The GIANT 6x00 product line offers a complete range of test functions for fully automated performance tests and basic NVH investigations and can be designed to fit the requirements of our customers.

Disk and drum brakes, the corresponding components and complete axles can be tested and exposed to the same conditions which are produced during vehicle operation. The SPARC Brake controller is integrated into the STARS Brake Automation System, providing accurate inertia simulation and precise test results, which can be analyzed with the click of a button.

### TEST PROGRAMS

- AK Master
  - AK Noise
  - AMS Fade
  - SAE J2521
  - SAE J2522
  - SAE J2521 Truck
  - ECE R13/R13H
- ECE R90
  - JASO C406 v2000
  - JASO C409 v2000 RC01
  - JASO C419 v2006
  - JASO C436 v1999
  - UIC 541-3
  - UIC 541-4
- If the specification desired is not listed, please get in touch with our team, we can develop any test program according to the desired specification.

## PRODUCT VARIANTS

The Optimum Solution for All Brake Testing Needs

	GIANT 6200	GIANT 6500	GIANT 6600	GIANT 6800
VEHICLE TYPE	<ul style="list-style-type: none"><li>• Cars</li><li>• Vans</li><li>• Light- and medium-duty vehicles</li></ul>	<ul style="list-style-type: none"><li>• Light-, medium- and heavy-duty commercial vehicles</li></ul>	<ul style="list-style-type: none"><li>• From heavy-duty commercial vehicles to railway applications</li></ul>	<ul style="list-style-type: none"><li>• High speed railway applications</li></ul>
TEST SAMPLES AND ASSEMBLIES	<ul style="list-style-type: none"><li>• Drum brakes</li><li>• Disc and calipers</li><li>• Knuckle fixtures</li><li>• MacPherson strut</li><li>• Complete axles structures</li><li>• Wheel load simulations</li><li>• Hydraulic brake actuation</li></ul>	<ul style="list-style-type: none"><li>• From disc and drum brake systems to complete axle and wheel assemblies</li><li>• Hydraulic and pneumatic brake actuation</li></ul>	<ul style="list-style-type: none"><li>• From disc and drum brake systems to complete axle and wheel assemblies</li><li>• Hydraulic and pneumatic brake actuation</li></ul>	<ul style="list-style-type: none"><li>• Disc/pad and wheel/ brake block assemblies</li><li>• Hydraulic and pneumatic brake actuation</li></ul>



### KEY BENEFITS

- Plug and play concept: our dynamometers are completely commissioned and sent to the customer as a fully functional system
- Machine frame resting on special vibration insulators (no seismic concrete foundation required)
- Flywheel set combined with electrical inertia to simulate the kinetic energy of a moving vehicle
- HORIBA designed brake actuator for precise brake pressure control
- Due to the modular design and years of engineering experience test stands can be fully customized to fit special customer requirements
- GIANT 6800 for railway applications fulfills all UIC requirements and has successfully received the UIC approval



# TECHNICAL SPECIFICATIONS

		GIANT 6200	GIANT 6500	GIANT 6600	GIANT 6800
POWER	[kW]	220	320	345	575
SPEED RANGE	[rpm]	± 0 - 2 800	± 0 - 1 200	± 0 - 1 200	± 0 - 2 750
MAX. DRAG BRAKE TORQUE	[Nm]	2 500	5 000	8 200	5 500
STOP BRAKE TORQUE RANGE	[Nm]	± 0 - 6 000	± 0 - 30 000	± 0 - 35 000	± 0 - 30 000
MECHANICAL INERTIA	[kgm²]	20 + 20 + 40 + 80	150 + 200 + 400 + 800	300 + 300 + 600 + 1 200	380 + 250 + 500 + 1 000
ELECTRICAL INERTIA SIMULATION RANGE	[kgm²]	5 - 240	50 - 2 400	100 - 3 000	200 - 4 000
MAX. HYDRAULIC PRESSURE	[bar]	200	200	200	200
MAX. HYDRAULIC PRESSURE GRADIENT (DEPENDENT ON TEST SPECIMEN)	[bar/s]	1 000	500	500	500
MAX. PNEUMATIC PRESSURE	[bar]	–	15	15	15
PNEUMATIC PRESSURE GRADIENT	[bar/s]	–	30	30	30

The GIANT 6x00 Series platform has three main focus points: passenger vehicles, commercial vehicles and high-speed railway applications. Through the correct sizing of electric main drive and mechanical flywheels, each dynamometer type is optimized to meet the requirements of the specific market segments but can also be modified to meet specific customer requirements.

The GIANT 6x00 can accommodate and integrate a variety of additional measurement systems in the automation system allowing for complete and in-depth investigations of all aspects of the brake system.

HORIBA Automotive, a business segment within the HORIBA Group, provides advanced mobility leadership and comprehensive engineering and measurement expertise to support the gradual shift from traditional propulsion, to fully electrified solutions.

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